FEBRUARY 25, 1957

THE Lumberman

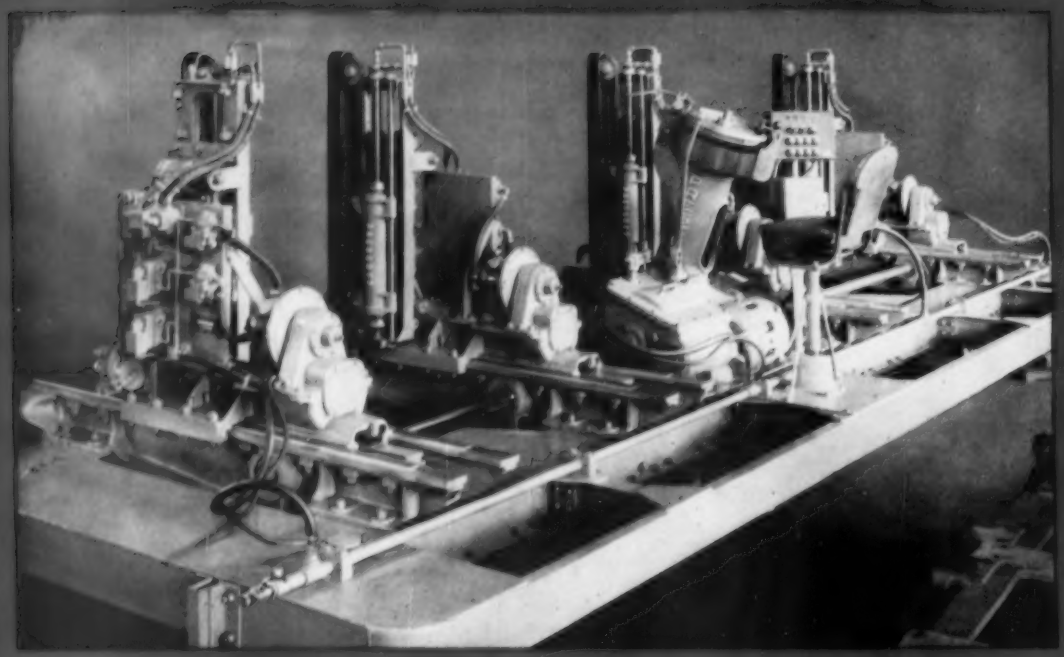
LUMBER PLYWOOD BOARD WOOD MANUFACTURING

Stud Mill Lines Up Gang Saws

Page 48

PARTICLE BOARD PLANT USES SHAVINGS Page 38

SOUTHERN MILL INSTALLS AUTOMATIC CARRIAGE Page 64



CARRIAGES—
Rack and pinion and screw block, medium, standard and heavy-duty — right and left hand.

PRESCOTT *sawmill machinery*

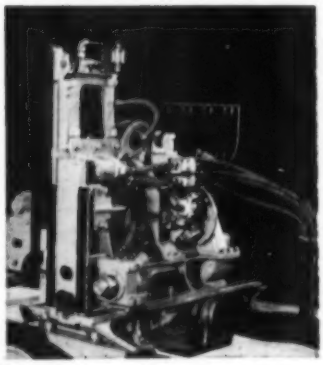
. . . designed to increase your NET *profit*

When you specify Prescott, you buy more than just sawmill machinery. You get the results of years of close association with leading sawmill operators in all parts of the country plus the benefits of first hand knowledge of the most efficient way to solve any sawmill operating problem.

A basic part of Prescott's standard design and application engineering procedure is a continuing study of the individual characteristics of the many different species of lumber — the changing demands of the overall finished lumber market — various sectional lumbering and sawmill practices — and the personal preferences of individual operators.

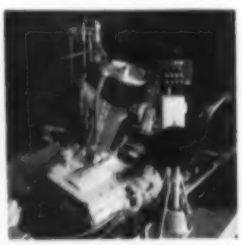
Prescott sawmill machinery provides you with the most effective way to get more saleable material out of every log — to cut manpower costs — to reduce overhead — and to increase your net profit. Prescott offers you the advantages of a wealth of experience that can prove invaluable in planning a new mill, expansion or modernization.

Call, wire or write for complete information on the finest, most modern heavy-duty sawmill machinery . . . detailed literature or the services of a Prescott direct factory representative.



POWER DOGS
Air, electric and hydraulic. For all sizes and makes of rack pinion and screw block carriages.

BANDMILLS
Complete range of sizes — 5-6-7-8-9 and 10 foot. Single or double cut — right or left hand.



SETWORKS
Manual and power — Trout, air, steam and electric. For all sizes and makes of rack and pinion and screw block carriages.

For Profitable Sawmill Operation . . . **SPECIFY**

PRESCOTT

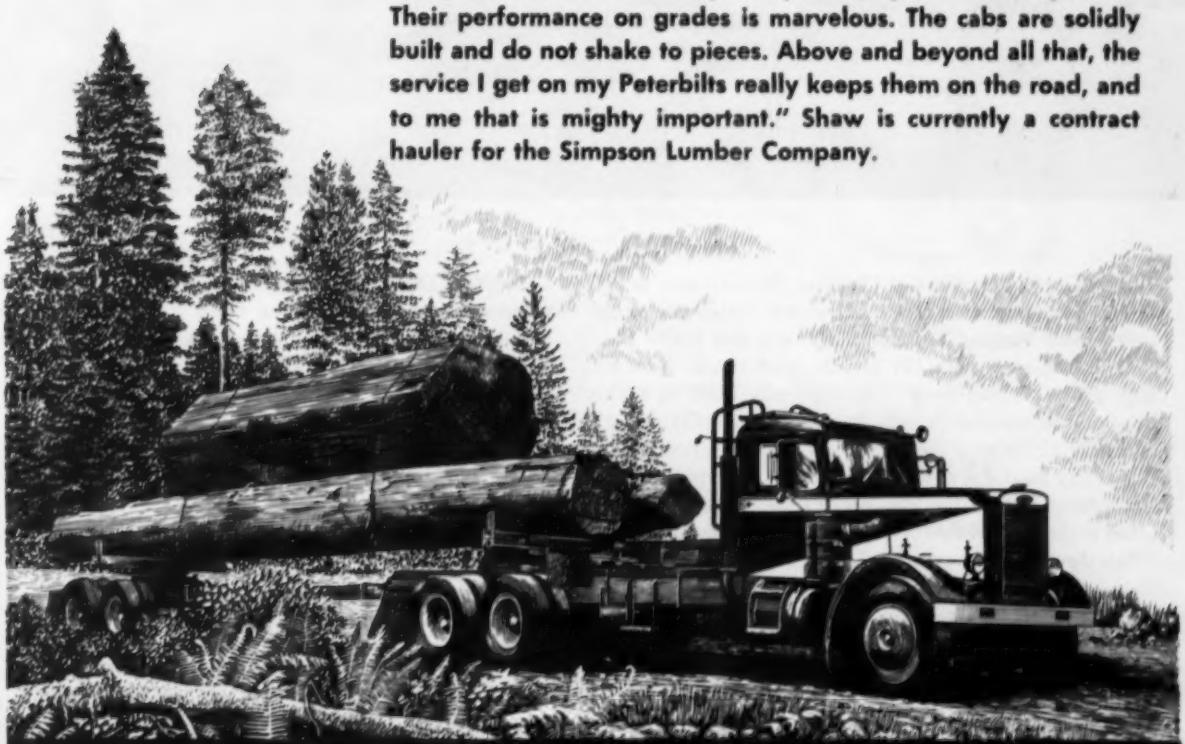
HIGH EFFICIENCY, HEAVY-DUTY SAWMILL MACHINERY

THE PRESCOTT COMPANY, *Menominee, Mich.*

Peterbilts

"Really stand up"—says Charles Shaw

Charles Shaw of Arcata, California has been operating PETERBILT LOGGERS for the past ten years. He is now operating a fleet of six Peterbilt aluminum loggers, Model 351, which enable him to haul about 3000 pounds more payload than with all steel models. When asked about his experience with these trucks, Shaw said: "They are trouble free. They really stand up under heavy loads. Their performance on grades is marvelous. The cabs are solidly built and do not shake to pieces. Above and beyond all that, the service I get on my Peterbilts really keeps them on the road, and to me that is mighty important." Shaw is currently a contract hauler for the Simpson Lumber Company.

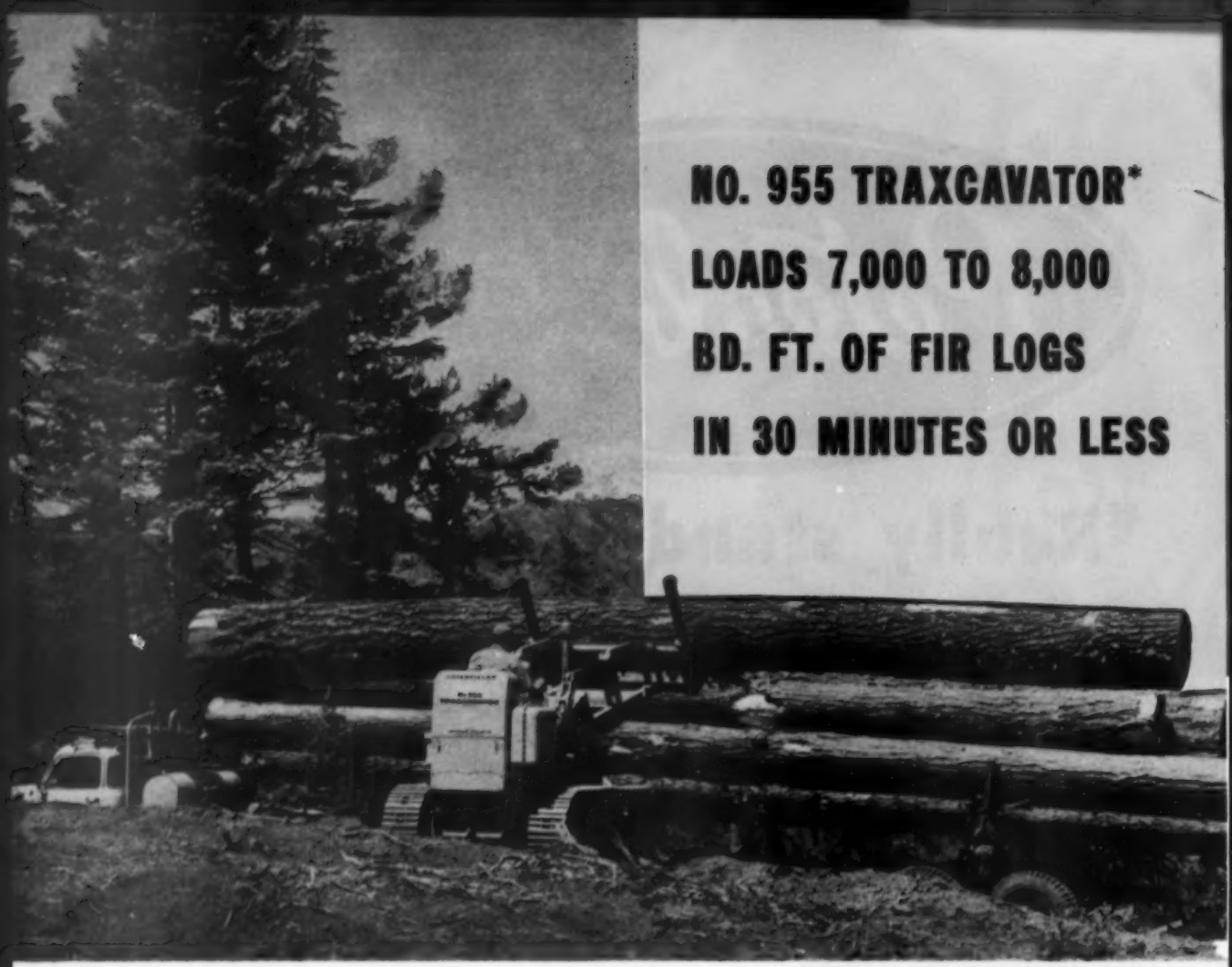


Peterbilt MOTORS COMPANY

10700 MAC ARTHUR BOULEVARD OAKLAND, CALIFORNIA

HEAVY DUTY TRUCKS—MACDONALD LOW BODY & LIFT TRUCKS

San Francisco · Salt Lake City · Spokane · Seattle · Portland · Redding · Sacramento · Stockton · Fresno · Los Angeles · Denver
Phoenix · Boise · Albuquerque · Hawaii



NO. 955 TRAXCAVATOR* LOADS 7,000 TO 8,000 BD. FT. OF FIR LOGS IN 30 MINUTES OR LESS

Junior Kemp Logging Co., Yakima, Washington, is selective logging two sections of private timber about 13 miles from Tieton. The company uses this CAT* No. 955 Traxcavator with lift fork to load trucks with fir logs up to 48 feet long. The rig loads 7,000 to 8,000 bd. ft. in 30 minutes or less. It is also used for skidding. It works 12 hours a day, 7 days a week. Junior Kemp says: "My loader is really fast. I think Caterpillar-built equipment is tops for logging. From experience with other makes, I find that it can really take abuse and give a full day's work every day."

Like all Caterpillar-engineered machines, the No. 955 is ruggedly built for the hard work. Designed from the ground up as a loading and excavating unit, it balances power, weight and traction for bigger production. A new arm design provides fast, high lifting action. An oil-type clutch reduces maintenance and adds greatly to clutch life. All controls are easy and convenient to operate. And a variety of quick-change attachments multiplies the number of different jobs you can do with this versatile rig.

One of three new Traxcavators in the Caterpillar line, the No. 955 packs 70 HP. The smaller No. 933 delivers 50 HP; the larger No. 977, 100 HP. Your Caterpillar Dealer, who backs you with prompt service wherever and whenever you need it, will be glad to demonstrate the all-round uses of a Traxcavator on your show. Call him today—name the date!

Caterpillar Tractor Co., San Francisco, Cal.; Peoria, Ill., U.S.A.

NEW QUICK-CHANGE ATTACHMENTS ADD TO A TRAXCAVATOR'S VERSATILITY!

With such easy-to-change attachments as lift fork, heavy-duty bucket, bulldozer, etc., here are some of the many ways you can keep a Traxcavator busy day in and day out: Loading or unloading trucks; decking logs or transferring them from deck to pond or mill; constructing and maintaining roads and fire lines; excavating and loading gravel, etc., removing snow. You can't beat a heavy-duty Traxcavator as an all-purpose tool!

CATERPILLAR*

*Caterpillar, Cat and Traxcavator are Registered Trademarks of Caterpillar Tractor Co.

WANTED—
THE HARD WORK

A MILLER FREEMAN PUBLICATION

OFFICERS

WM. B. FREEMAN ..... President
LAWRENCE K. SMITH ..... Vice-President
EDGAR P. HOENER ..... Vice-President
MILLER FREEMAN JR. ..... Secretary-Treasurer

EDITORIAL STAFF

W. E. CROSBY ..... Editorial Director
ALBERT ARNST ..... Editor
LOUIS H. BLACKERBY ..... Associate Editor
WARD C. WILLIAMS ..... Associate Editor
STANLEY M. JEPSEN ..... Associate Editor
HAROLD H. KEIL ..... Associate Editor
LEE R. FLATBERG ..... News Editor

BUSINESS STAFF

JAMES C. WALLACE ..... Sales Manager
J. B. OLSON ..... Buyer's Guide-Classified Sales Manager
JOHN LAUGHLIN ..... Production Manager

PUBLISHING OFFICES

519 Southwest Park Avenue
PORTLAND 5, OREGON
Telephone CApitol 2-1314

ADVERTISING OFFICES

PORTLAND 5, OREGON
519 S. W. Park Avenue
CApitol 2-1314 — Charles W. Cowman, J. B. Olson

SEATTLE 4, WASHINGTON
71 Columbia Street
Main 1626—James C. Wallace

SAN FRANCISCO 5, CALIFORNIA
500 Howard Street
EXbrook 7-1881—Stuart F. Leete, W. H. Pearson

VANCOUVER 3, B. C.
502 Pender Street, West
MArine 7287—C. L. Shaw

LOS ANGELES 65, CALIFORNIA
3501 Eagle Rock Boulevard
CLinton 5-7194—Raul Rodriguez

NEW YORK 17, NEW YORK
370 Lexington Avenue
MUrray Hill 3-9294—Ralph R. David

CHICAGO 26, ILLINOIS
1791 Howard Street
ROgers Park 4-3420—E. T. Wang, K. A. Kruse, R. F. Hanrahan

PUBLISHED every fourth Friday by MILLER FREEMAN PUBLICATIONS, INCORPORATED, 519 S. W. Park Avenue, Portland 5, Oregon. Entered as second-class matter at the Post Office at Portland, Oregon, under Act of March 4, 1879.

READERSHIP RESEARCH

SUBSCRIPTION RATES—U. S., Canada, Mexico and other Pan American Union members—one year $4.00; two years $6.00; three years $8.00. Other countries—one year $5.00; two years $8.00; three years $11.00; Single copy 50 cents except Annual Plywood Review number $1.00.

CHANGE OF ADDRESS—Send subscription orders and changes of address to Subscription Department, THE LUMBERMAN, 500 Howard Street, San Francisco 5, California. Include both old and new addresses and zone number.

ADVERTISING—Complete plates only should be sent to: THE LUMBERMAN, 235 N. W. Park Ave., Portland, Oregon. Advertising copy and cuts, insertion orders and all instructions should be sent to the publishing office: 519 S. W. Park Ave., Portland 5, Oregon.

COPYRIGHT, 1957, by Miller Freeman Publications, Incorporated. Contents may not be reproduced without permission.

POSTMASTER: Please send Notice 3579 to THE LUMBERMAN, 500 Howard St., San Francisco 5, California.

THE Lumberman

The Production Journal of the Forest Products Industries Since 1889

Volume 84 **FEBRUARY 25, 1957** **Number 3**

IN THIS ISSUE

What the Industry Is Doing . . . and Why

Features

Particle Board Plant Uses More Planing Mill Shavings 38
Weyerhaeuser Timber Co. operates new utilization unit at North Bend, Oregon.

Hardwood Mill Maintains Quality Lumber Production 42
Brown Company in New Hampshire, started in 1826, produces 20M board feet yearly.

Edge and End-Gluing Process Produces Furniture Panels 44
Wolverine Western Lumber in Oregon utilizes lower grade pine to fabricate paneling.

Stud Mill Lines Up Three Gangs to Boost Production 48
Elk Lumber Co. at Medford, Oregon, operates "unorthodox" 2x4 mill which stresses high recovery and precision made product.

Remote Controls Automate Mill's Resaw Setworks 52
Pacific Pine Ltd. in British Columbia installs electro-hydraulic console controls.

Insulation Board Plant Employs New Process 54
National Gypsum Company plant at Mobile, Alabama, adds to existing facilities and doubles capacity.

Flexibility Pays Off For This Sawmill 58
With minimum manpower, Arden Lumber Co. cuts 45M board feet of dimension lumber per shift.

Southern Mill Installs Riderless Carriage 62
Barrow Manufacturing near Ahoskie, North Carolina, has become focal point for mill operators interested in highly mechanized automatic equipment.

Now It's Colored Boxes! 63
Seattle Box Company, Seattle, Wash., has recently shipped its first order for colored wooden boxes.

Mill Modernization Program Accents More Accurate Sawing 64
Brooks-Scanlon, Inc., in Oregon initiates long range plant conversion program.

Electrical Tests Save Mill Shut Downs by Lyne S. Metcalfe 110

Barker and Chipper Help Solve Higher Labor Costs 112
Olon Belcher Lumber Co. in Alabama finds residue utilization profitable.

The Trend in the Lumber Industry by Brian B. Gattie 116

Miscellaneous

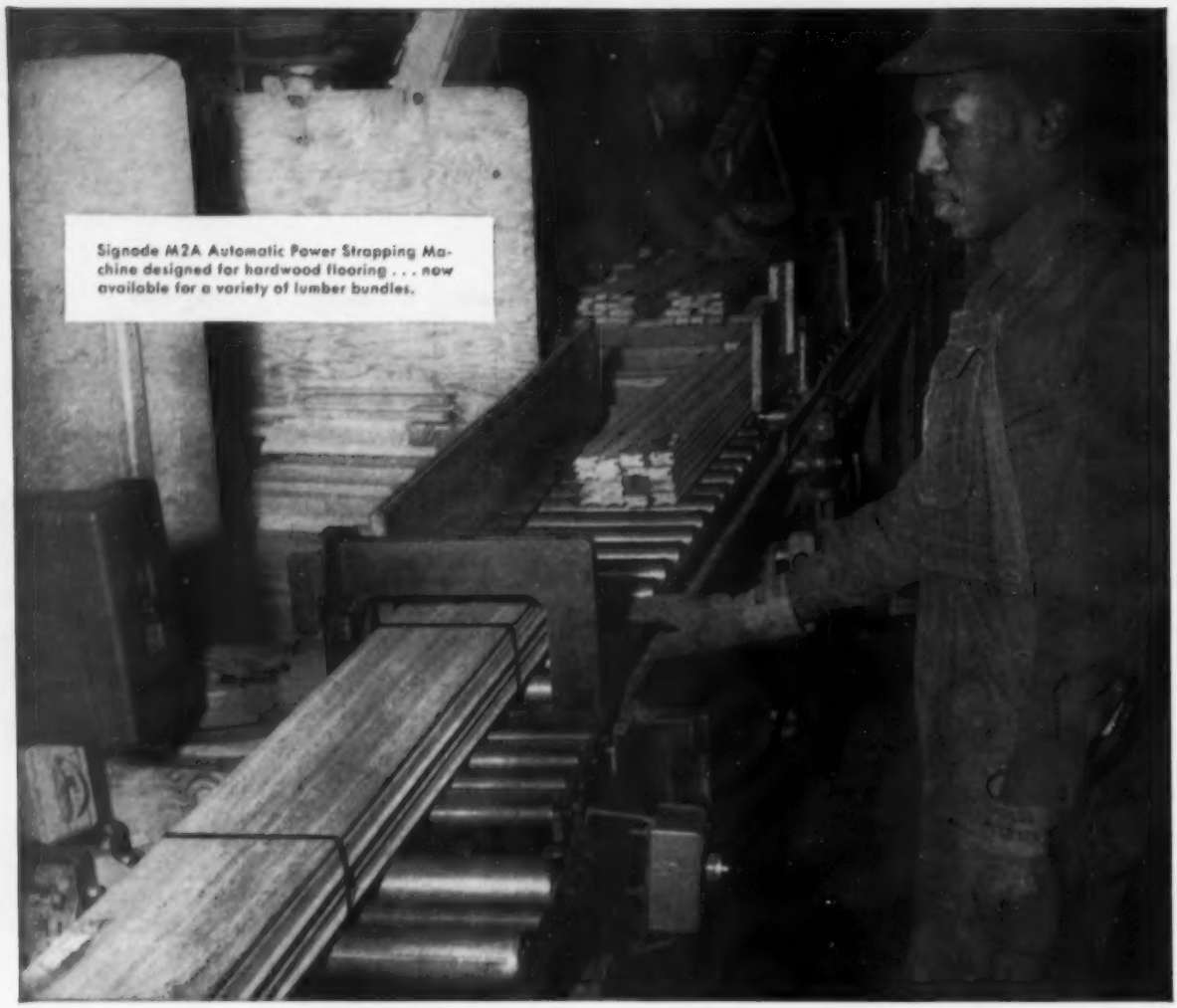
Filer Converts Edger Saws Into Splitting Units 53
British Columbia Lumber Markets Down 120
How Double-End Tenoners Work 121
30-Man Camp on Wheels Keeps Close to Logging 130

Departments

Tall Timber—Burton W. Schmidt 5
THE LUMBERMAN'S Lookout 7
Industry Trends 9
Late Forest Industries News 17, 18, 19, 20
Safety Engineering 27
EDITORIAL—Lumber Industry Needs More Salesmen 37
Hardboard, Particleboard & Flakeboard 57
Plywood Department 60
Log and Lumber Prices 122
Machinery & Equipment 132
Advertising Index 155

Industry Meetings

List of Industry Meetings 5
Pacific Division National Wooden Box Ass'n. 74
Northwest Hardwood Association 86



Signode M2A Automatic Power Strapping Machine designed for hardwood flooring . . . now available for a variety of lumber bundles.

NOW! Automatic bundling . . . with SIGNODE'S New Power Strapping Machine!

It's here! Signode's new M2A *Fully Automatic* Power Strapping Machine—the last word in fast, economical bundling!

The strap chute of the specialized model shown here is designed for bundling 25/32" flooring in standard stacks 3 or 4 boards wide and 4 boards high. Modifications for other stacking patterns are available. The machine is capable of making 800 ties per hour . . . as much as 60M bd. ft. per 8-hour day!

FASTER BUNDLING CUTS COST

Signode's new M2A power strapping machine does its job safer as well as faster, with uniform tension on every strap. And faster bundling helps speed up all other handling operations—stacking, tallying, and loading.

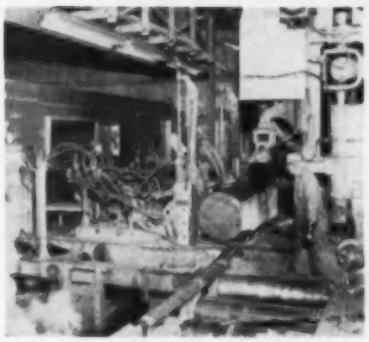
If your plant bundles flooring, KD millwork, crating lumber, trim, and other lumber products on production line scale, it will pay you to get the facts about the new, faster bundling M2A. Write:

SIGNODE STEEL STRAPPING CO.

2616 N. Western Avenue, Chicago 47, Illinois

San Francisco, 383 Brannan St.; Portland, Ore., 1519 N.W. Irving St.;
Seattle, 2 Hanford St.; Spokane, 417 Paulson Bldg.;
Canadian Steel Strapping Co., Ltd., Vancouver, B.C.

Our Cover Picture



BREAKING EIGHT FOOT logs down into flitches at Elk Lbr. Co., Medford, Ore. with Sumner long-column eight food band headrig and steam shotgun carriage consisting of Klamath Machine & Locomotive Works framework and Klamath Machinery Co. superstructure. See page 48 for story.

Industry Meetings

March, 1957

Willamette Valley Logging Conference, Eugene, Ore., Feb. 28-March 2.

Western Pine Association, annual meeting, Sheraton-Palace hotel, San Francisco, March 7-8.

National Association of Commission Lumber Salesmen, Coronado Hotel, St. Louis, Mo., March 7-9.

Fleet Supervisors Training Course, University of Washington, Seattle, March 11-15.

Southern Forestry Conference, Dinkler-Plaza Hotel, Atlanta, Ga., March 14-15.

Intermountain Logging Conference, 19th annual, Davenport hotel, Spokane, Wash., March 25-27.

Canadian Institute of Timber Construction, Hotel Vancouver, Vancouver, B. C., March 25-28.

West Coast Lumbermen's Association, annual meeting, Multnomah hotel, Portland, Ore., March 27-28.

April, 1957

Olympic Logging Conference, Empress Hotel, Victoria, B. C., April 4-5.

Forest Products Safety Conference, Chinook Hotel, Yakima, Wash., April 4-5.

Southern Pine Association, Ponchartrain Amusement Area, New Orleans. Machinery show, April 5-7; business meeting, April 8-10.

Northwest Wood Products Clinic, Spokane, Wash., April 9-10.

Industrial Forestry Association, annual meeting, Multnomah Hotel, Portland, Ore., April 16.

May, 1957

Junior Logging Congress, Pack Forest, LaGrande, Wash., May 8-10.

Western Kiln Clubs, Eugene, Ore., May 15-17.

Redwood Region Logging Conference, 19th annual, Eureka, Calif., May 24-25.

Mason County Forest Festival, Shelton, Wash., pageant, parade and logging sports demonstration, May 23-25.

June, 1957

National Plywood Distributors Assn., annual convention, Edgewater Beach Hotel, Chicago, June 13-15.

Forest Products Research Society, annual national meeting, Exhibit, and Wood Industry and Suppliers, Hotel Statler, Buffalo, N. Y., June 23-28.

October, 1957

Pacific Logging Congress & Machinery Show, Seattle, Oct. 30-Nov. 1.

THE Lumberman

Presents as Tall Timber . . .

Burton W. Schmidt

Tall Timber

Burton W. Schmidt, Vice Pres. of Schmidt Brothers, Inc., Weippe, Ida.

WHEN THE SPOKANE, Wash., session of the Intermountain Logging Conference convenes late in March, it again will be headed by a man whose hands are more accustomed to grasping "stick and throttle" of a plane than a gavel. This year's president—Burton W. Schmidt, vice president of Schmidt Brothers, Inc., Weippe, Ida.—got off to a "flying start" during World War II and has since intermixed flying with both business and pleasure, as have two other recently retired Conference prexies.

He is a native Idahoan, having been born into a logging-sawmilling family 37 years ago this month (March 14th) at Plummer. Two years later his father —W. F. Schmidt, active in the industry since 1912 and, as president, continues as head of the Schmidt organization—moved to Weippe where Burton attended grade school. He attended high school at Lewiston and went on to University of Idaho at Moscow.

The present Intermountain president entered the industry — and coincidentally received a basic introduction to occupational safety—at the early age of 10. The job consisted of feeding logs from pond to sawmill. Besides getting a briefing in fundamentals of safe employment he wore an automobile innertube "lifesaver" while on duty. At age 12 he switched to the woods operations, thereby making acquaintance with the rigors of brush piling and the intricacies of tractor operation early in life. On an intermittent schedule he continued to devote summers to logging and rest of the year to school until entering military service during the war.

RETURNING TO CIVILIAN pursuits following separation from service, Mr. Schmidt went to work for Potlatch Forests Inc. at Lewiston as a member of the carpenter crew. He says, "This lasted until spring of 1946, when I went to work for dad . . . taking over the woods operations."

In 1948 he became a member of the Schmidt Brothers organization (partnership) and in 1954 became vice president when the firm incorporated as Schmidt Brothers, Inc.

Considerable change has taken place in the organization's logging methods and machinery since Burton Schmidt took over the woods end. A summation of these would include: Large tractors replaced the small ones, stiff-boom jammers yielded to shovels and mobile cranes for loading logs, tree-length skidding was adopted, the company eliminated its dependency on gyppo haulers by purchasing its own truck fleet, and during the past year converted to long logs after acquiring a fleet of new diesel-powered trucks to replace its gas-powered vehicles.

THE "FLYING" PHASE of Mr. Schmidt's life built up momentum with a fast enlistment as a USAF cadet, this leading into a series of events and experiences which established aviation as a rather basic segment of everyday living. He went to San Antonio, Texas, for pre-flight training, to Pine Bluff, Ark., for primary, to Winfield, Kan., for basic flight work and to Mission, Texas, for advanced training at Moore Field where he received his wings and a 2D Lieutenant's commission.

SUBSEQUENTLY, WITH AIR Transport Command, he piloted C47s out of Atlanta, Ga., and ferried C46 cargo planes from Miami to Natal, Brazil (first step on the Africa route); assigned back to West Coast, he ferried P51s and C47s from Long Beach to Australia and flew B17s and B24s to various points throughout US.

Later, as Flight Commander (now 1st Lt.) at pursuit schools in Brownsville, Tex., and Greenwood, Miss., he taught former B17 and B24 pilots, returned from ETO, how to ferry pursuit aircraft. Upon completion of this tour and 3½ years military duty, he returned to Boise and there left the service in Sept. 1945.

Burton Schmidt has been a director of Intermountain Logging Conference for seven years, served as 1955-56 vice president, and was elected president last March. He is an Alpha Tau Omega (U. of I.) and member of the Elks lodge.

"What a difference the frame makes!"

An Autocar frame starting down the assembly line in the upside-down position which permits easy mounting of transmission and rear axles.

Autocar's heat-treated alloy steel frame means many more years of low-cost operation

You need two qualities in a heavy-duty truck frame, and Autocar has them both.

First, the frame must be *rigid* enough to hold major components permanently aligned or else the whole truck will be working against itself and wear out rapidly.

Second, it must be *flexible* enough to travel over rough country without straining itself beyond the springback point.

Rigid but flexible frames provide Autocars with a sound foundation for a long and profitable operating life. But they're only one of Autocar's exclusive features that pay off for every Autocar user.

LOOK AT THESE FEATURES, TOO

Custom building makes your Autocar fit your particular hauling conditions.

Nut and bolt construction with lockwashers under head and nut holds fast but permits easy removal of parts for repairs.

Balanced drive shaft and balanced front end prevent wear from vibration.

Find out how Autocars can step up efficiency in your heavy-duty hauling. See your White-Autocar distributor or write direct to the factory.

Autocar

AUTOCAR TRUCKS

Autocar Division of The White Motor Company
Exton, Pa.

The LUMBERMAN'S LOOKOUT

INCREASED SQUEEZE ON NARROWING PROFITS margin in 1957 for lumbermen will demand greater attention to cost accounting, will force more cost and labor saving automation in sawmils. Long range outlook for housing starts, beginning in 1960, is good. But lumber faces intense competition, will have to fight hard to retain present markets, let alone win new ones. Profits must be set aside now for later capital expansions.

HARDWOODS ARE IN for more recognition, both by plywood and lumber industries. As face stock in Douglas fir plywood industry becomes scarcer, western hardwoods should enjoy new outlets. They offer both beauty and utility, will turn more attention to utilization methods, slicing and drying techniques.

COLOR PROBABLY WILL BE USED MORE by lumber industry in merchandising its products. Color-conscious consumers are being wooed effectively by car, textile and plastic manufacturers. What's wrong with pre-painting, pre-finishing and end-coloring lumber, plywood or hardboard—even boxes? Color can be major stimulus in holding and winning markets.

HOUSE BUYERS WILL BE more selective in 1957. Builders must build a better house for less money. Look for more use of pre-cut material, clear span prefabricated trussed rafters, post-plank-and-beam construction. By using these techniques, partitions aren't elements of roof support, can even be made movable, like screens. Or, one lumber item can combine structural, insulation and finish qualities, like roof decking.

LOOK FOR MORE USE of TV monitoring of sawmill and plywood operations. Closed circuit television has already demonstrated its value in remote control of chip loading operations. One man in central location can see "out-of-sight" operations, the push-buttons to start or stop conveyor systems as needed. It's conceivable that sawmill or plywood plant manager can have on his desk TV screens which show at touch of button all important operations in the mill. Performance of men at key stations where good judgment is needed, like headsawyer,can be monitored.

HIGHER PROSPERITY IS PREDICTED for 1957, but it will be illusory. Perhaps half of the anticipated dollar gain will reflect price boosts instead of actual increases in volume of goods and services produced. Inflation will go on for another half year, maybe longer, bringing a new succession of highs in the cost of living. Prices will inch up. Incomes will rise. Government spending, up. Tight money policy will prevail.

OUTLOOK FOR HOUSING in 1957 is down, with a million new private dwelling starts predicted by the Commerce and Labor Departments. This compares with 1,300,000 starts in 1955 and about 1,100,000 in 1956. Total new construction in 1957 is expected to set a record -- $46.5 billion.

Every little bit cuts MORE

on a

SIMONDS INSERTED TOOTH SAW

125 years of growth 1832-1957

SIMONDS
SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon
Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N. Y.
Heller Tool Co., Newcomerstown, Ohio
Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

The tough, high temper steel plate of a Simonds Inserted Tooth Saw holds its tension . . . seldom requires hammering . . . permits heavy feeds in all types of cutting, at any season of the year. Rugged as the range, a Simonds Saw stands up longer under general saw mill use and abuse.

Sockets or gullets are milled and held to close tolerances, insuring uniformity and perfect fit for new bits and shanks when needed during the long life of every saw. Fitted with "Blue Tip" Bits and "Red Circle" Shanks, Simonds "Red Streak" Saws cut fast and straight, are the most dependable and economical for head saw or edger use.

So get a Simonds Saw and save, as you cut more and higher grade lumber.

For Fast Service from Complete Stocks

Call your SIMONDS Industrial Supply DISTRIBUTOR

WATERBORNE SHIPMENTS. A 44% drop in United Kingdom imports of lumber from western North America is the key influence in a sharp decline in waterborne lumber movement from British Columbia and western states of the United States during 1956. Australian and African markets also declined.

As a result, total waterborne movement from western North America was 19% below the level of 1955, declining from 3,464,808,770 feet in 1955 to 2,040,104,873 feet in 1956.

Exports were off 31%, from 1,424,703,897 feet in 1955 to 979,444,982 feet in 1956. Domestic waterborne movement was down 10.7%, from 2,040,104,873 feet in 1955 to 1,821,772,138 feet in 1956.

How the reduced market in the U.K. —brought on by efforts to reduce stocks of the government and private firms, large purchases from other industries, and credit restriction — effected the North American trade is highlighted in comparisons of U. K. imports from western North America: 649,516,703 feet in 1955—363,398,457 feet in 1956.

As a result of the reduced U. K. market, B. C. fell into second place among the west coast areas, trailing Oregon which in 1956 totaled 1,029,139,896 feet of waterborne lumber. This total is 13.7% behind 1955. B. C.'s total of 989,660,,477 is down 29.9% from 1955; Washington's 622,631,191 feet is down 13.9%; California's 159,785,556 feet is up 16.9%.

PAPERBOARD PRODUCTION by Canadian mills during 1956 reached a record of approximately 900,000 tons, about 14% greater than in 1955. This is the biggest and best year in the history of the paperboard industry in B. C. Exports during 1956 were about 50% greater than in 1955.

REDWOOD PRODUCTION in 1956 was slightly ahead of 1956, .4%, but orders received fell off 15% and shipments 9.2%. Stocks on December 31, therefore, were 17% above those of the same period in 1955. These comparisons are made on the basis of reports of 20 major redwood companies to the California Redwood Association.

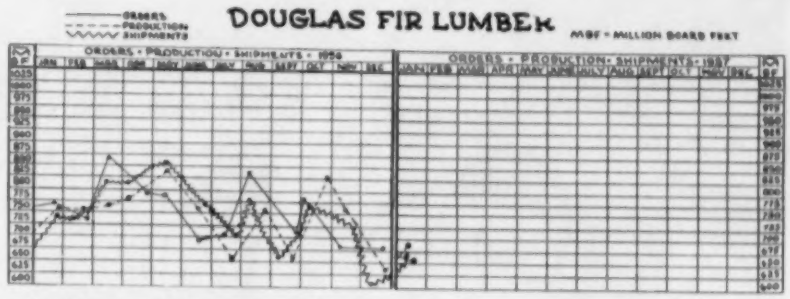
WESTERN PINE stocks at the end of 1956 totaled 2.1 billion feet, 16% above the end of 1955, and also the same amount above the average for the past three years. Production for the year was 3% under a year ago; shipments were down 6%.

SALES ON NATIONAL FOREST timber in California in fiscal 1956 went at an average price 23¼% above the same period a year ago. A total of 1.9 billion feet was sold for $21.5 million in fiscal 1956. The over-all average price per thousand feet paid in fiscal 1956 was $18.13 compared to $14.71 in fiscal 1955. During 1956 there was an increase in the amount of Douglas fir sold and a decline in pine sales.

SHIPMENTS OF WOODEN boxes at the end of 11 months are 10.3% below the same period of 1955, the National Wooden Box Association reports. Shipments for the 11 months total 540,238,889 feet, compared to 602,468,198 a year ago. Business in the east appears to be in a better relationship with a year ago, down 5.91%, compared to a drop of 11.9% in the west.

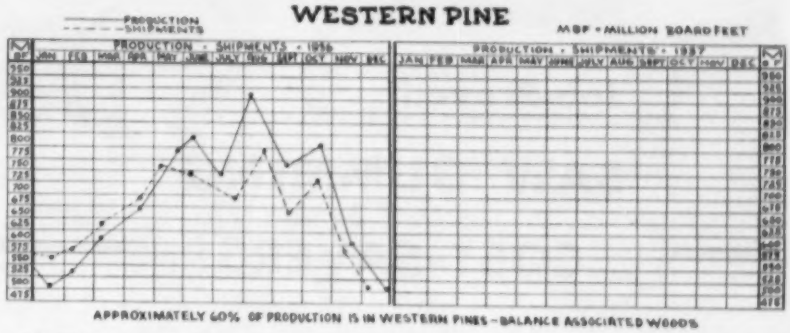
INDUSTRY TRENDS

DOUGLAS FIR LUMBER



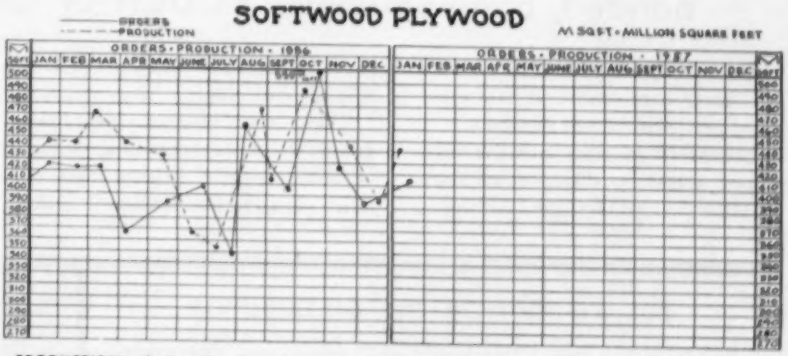
DOUGLAS fir region production for the first month of 1957 totals 689 million feet, under the 789 million feet in the same period of 1956, well below the 810 million feet of 1955. Orders for the month totaled 651 million meet; shipments 674 million feet. On January 31, 1957 unfilled orders were 582 million feet; gross stocks 1.074 billion feet.

WESTERN PINE


PRODUCTION
SHIPMENTS
MBF - MILLION BOARD FEET
PRODUCTION - SHIPMENTS - 1956
PRODUCTION - SHIPMENTS - 1957
APPROXIMATELY 60% OF PRODUCTION IS IN WESTERN PINES - BALANCE ASSOCIATED WOODS

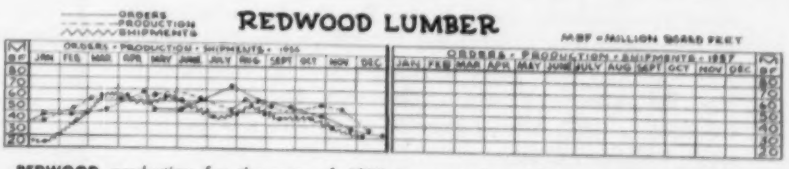
PRODUCTION of pine lumber in the West during the 12 months of 1956 totaled 8.265 billion feet, compared to 8.525 billion feet during 1955. Shipments for 1956 were 7.967 billion feet compared to 8.483 billion feet in 1955. Gross stocks on December 31, 1956 were 2.103 billion feet, compared to 1.805 billion feet at the end of 1955.

SOFTWOOD PLYWOOD

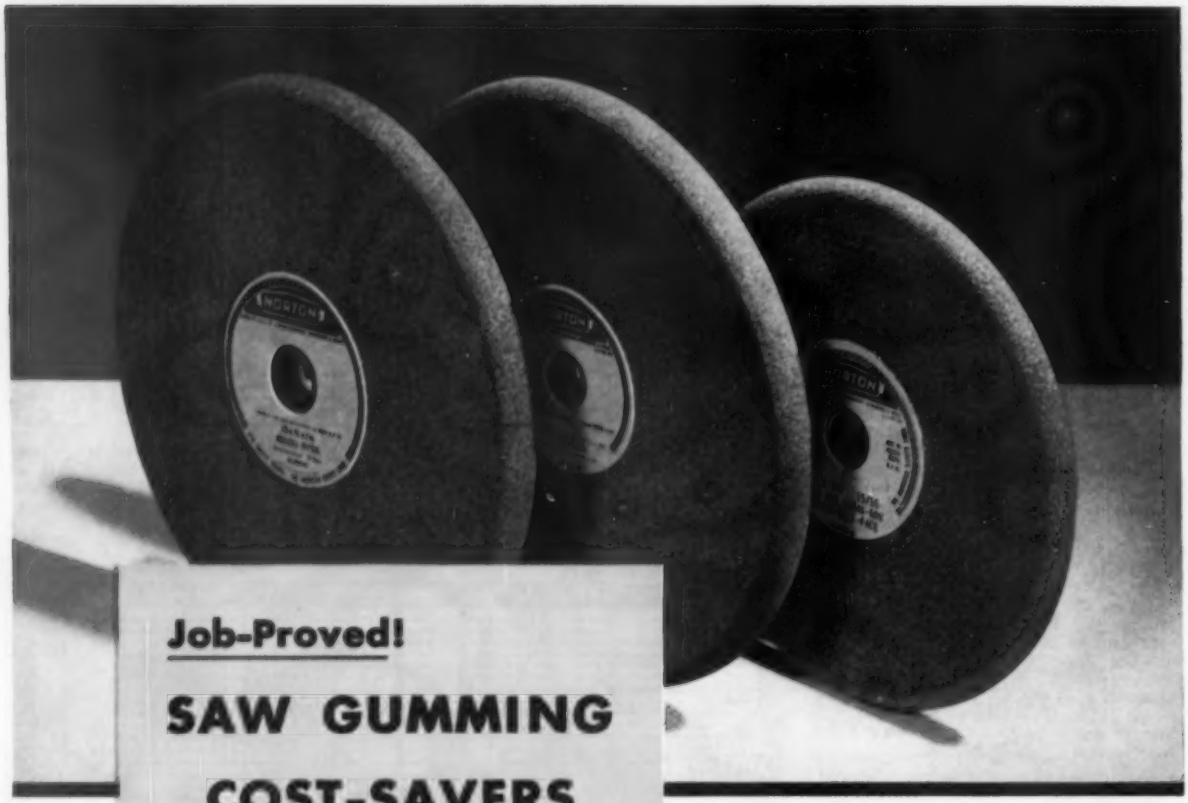


PRODUCTION of Douglas fir plywood for the first 5 weeks of 1957 was 473 million square feet, a 7.3% decrease from same period of 1956. New orders received during the same period of 1957 totaled 448 million square feet. Unfilled order file at the end of 5 weeks was 293 million square feet. Totals based on mills producing 89.1% western output

REDWOOD LUMBER



REDWOOD production for the year of 1956 is reported at 663 million feet by 20 major producers. Shipments totaled 589 million feet; orders 565 million feet. Comparisons with 1955 were: production 660 million feet; shipments 648 million feet; orders 669 million feet. December 31, 1956 stocks on hand were listed at 398 million board feet.



Job-Proved!

SAW GUMMING COST-SAVERS

Norton **44 ALUNDUM*** grinding wheels, resinoid bonded, bring you new "TOUCH of GOLD" advantages

Here's why these Norton wheels are the latest pace-setters in saw gumming performance and economy.

Compared to other non-premium priced abrasives, their 44 ALUNDUM abrasive gives you fast, cool cutting... protection against heat damage... excellent form holding... long service life.

Their new resinoid bond safeguards these benefits with uniformity of structure and balance that cut down vibration and bounce. It makes possible an evenly spaced range of hardness throughout the entire grade scale, and where desirable in half-grade increments, making it easier for you to choose exactly the right wheels —and get closest possible duplication.

SEE YOUR NORTON DISTRIBUTOR

for these first-rate "Touch of Gold" advantages that mean better performing, longer-lasting saws and lowest cost sharpening. The Norton grinding wheel plant at Santa Clara, Calif., supplies West Coast Distributors with 44 ALUNDUM wheels and other types you need. Other Norton Distributors are located in all industrial areas, listed under "Grinding Wheels" in your phone book, yellow pages. NORTON COMPANY, Worcester 6, Mass. Behr-Manning Company, Troy, N. Y., Division of Norton Company. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass.

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

W-1776

NORTON

ABRASIVES

Making better products... to make your products better

NORTON PRODUCTS: Abrasives • Grinding Wheels • Grinding Machines • Refractories

BEHR-MANNING PRODUCTS: Coated Abrasives Sharpening Stones • Behr-cat Tapes

Kill next summer's weeds now!

SOIL STERILANTS APPLIED IN WINTER AND SPRING KEEP GROUND BARE ALL YEAR

WEED KILLERS RECOMMENDED FOR WINTER AND SPRING APPLICATION

CONCENTRATED BORASCU*—Destructive to all types of vegetation. Can be applied dry, cast by hand or with a fertilizer or seed spreader. Concentrated form saves transportation, handling and storage costs.

BARON*—Dow Chemical Company's new nonselective herbicide that remains in the soil for extended periods of time, giving control of germinating seedlings following initial treatment. Mixes easily with water.

TELVAR* W—Industrial-use weed and grass killer produced by Du Pont. Wettable powder applied by sprayer, economical for large and small areas.

TELVAR DW—Similar to Telvar W but remains in soil longer under adverse conditions. Recommended for use in light, sandy soils and where rainfall is exceptionally heavy.

**BORASCU—Reg. trademark of United States Borax & Chemical Co., Pacific Coast Borax Co. Division. BARON—Reg. trademark of The Dow Chemical Co. TELVAR—Reg. trademark of E. I. du Pont de Nemours & Co.*

CHAPMAN

CHAPMAN CHEMICAL COMPANY
Memphis 1, Tennessee

Minneapolis • San Francisco • Portland, Ore. • Charlotte, N. C.

Distributor of a complete line of weed, brush and grass killers produced by leading manufacturers.

Now is the time of year to rid yards, roadbeds, and ditches of next summer's fire-hazardous weeds and grasses. Just apply an economical soil sterilant to eliminate all vegetation for a year or more. No need for costly periodic chopping or cutting, because the weeds are killed at their roots by the poison-laden rainwater. Mail coupon for more information on these effective weed, brush, and grass killers distributed by Chapman Chemical Company.

GET THE FACTS ON CHEMICAL WEED KILLERS

CHAPMAN CHEMICAL COMPANY
P. O. Box 138, Memphis 1, Tenn.

Please send complete information on chemical weed killers checked:

☐ Concentrated Borascu ☐ Baron
☐ Telvar W ☐ Telvar DW

*Name*_____

*Address*_____

Crawler-mounted Type 703 equipped with heeling boom. Loading on trailer at relogging site along Trask River, Ore.

LIMA CRANES...

Capacities and mountings for every logging job

Loggers like LIMA cranes, because they can take the punishment of the toughest log loading job. They are ruggedly constructed to provide fast, safe log handling with minimum downtime.

Years of manufacturing experience have resulted in many quality engineering features to give long profitable operation, for example: Air controlled clutches on the larger types provide smooth easy control of all operations; Anti-friction bearings in the drums and other critical parts keep wear at a minimum and lessen lubrication problems; Piston-ring-type dirt seals in the crawler rollers exclude abrasive material which wears out bushings and shafts; Torque converter drive (optional) for greater power without stalling; Readily interchangeable front-ends for shovel, crane or clamshell operation. LIMA cranes come with mountings for every need—crawler, truck and wagon type and in sizes to fit every demand.

See your LIMA distributor for complete information about the machine best fitted to your needs . . . or write Construction Equipment Division, Baldwin-Lima-Hamilton Corporation, Lima, Ohio.

CRAWLER TYPE

- Available in variable capacities
- Travel speed up to 1 mph
- All major operations air controlled except Types 34 and 44
- Independent boom hoist
- Long crawler mounting for greater stability

TRUCK TYPE

- Mounted on LIMA 10 wheel truck carrier
- Powered by two engines (one in carrier, one in rotating frame)
- Travel speed, 25 mph
- Types 24, 34, 44, 54 and 74 available with truck mounting

WAGON TYPE

- Types 24, 34, 44, 54, 64 and 74 available with wagon mounting
- One engine powers all operations, including travel
- One operator controls all operations from cab
- Rotating assemblies have same basic quality features as corresponding crawler-type machines

Truck-mounted Type 54-T equipped with a 52-ft. pipe boom. On an operation near Rexford, Mont.

Wagon-mounted Type 54-W loading sugar pine, ponderosa pine and Douglas fir near Castella, Calif.

LIMA SHOVELS · CRANES DRAGLINES · PULLSHOVELS

BALDWIN-LIMA-HAMILTON
Construction Equipment Division — LIMA WORKS

Our Seattle Office
1932 First Avenue South
Seattle, Washington

Evans Engine & Equipment Company
4300 - 11th Ave. N.W.
Seattle 7, Washington

Feenaughty Machinery Company
112 S.E. Belmont Street
Portland 14, Oregon

Feenaughty Machinery Company
600 Front Street
Boise, Idaho

Dietrich-Collins Equipment Ltd.
890 S.W. Marine Drive
Vancouver, B. C., Canada

Modern Machinery Co., Inc.
4412 Trent Ave.
Spokane 2, Washington

Cascade Industrial Supply
Highway 99, So.
Redding, California

clear-span Soulé Buildings

SERVE MILL AND WOODS OPERATIONS BEST

More Space — the post-free interiors of Soulé Buildings give more usable work area — important when you're handling logs. Clear-span frames help you plan more efficient chain, mill or plywood plant operations. And if you are warehousing forest products, you can store more in post-free Soulé Buildings. **Mobility** — Soulé Buildings bolt together quickly right in the field. There's no welding or riveting. When your site moves, you dismantle your Soulé Building, move it and re-erect it with 100% parts salvage. **Low-Cost** — building parts are mass produced for economy. Standardized design and easy erection with even unskilled labor gives you big savings in initial cost. And rugged Soulé Buildings need little or no maintenance.

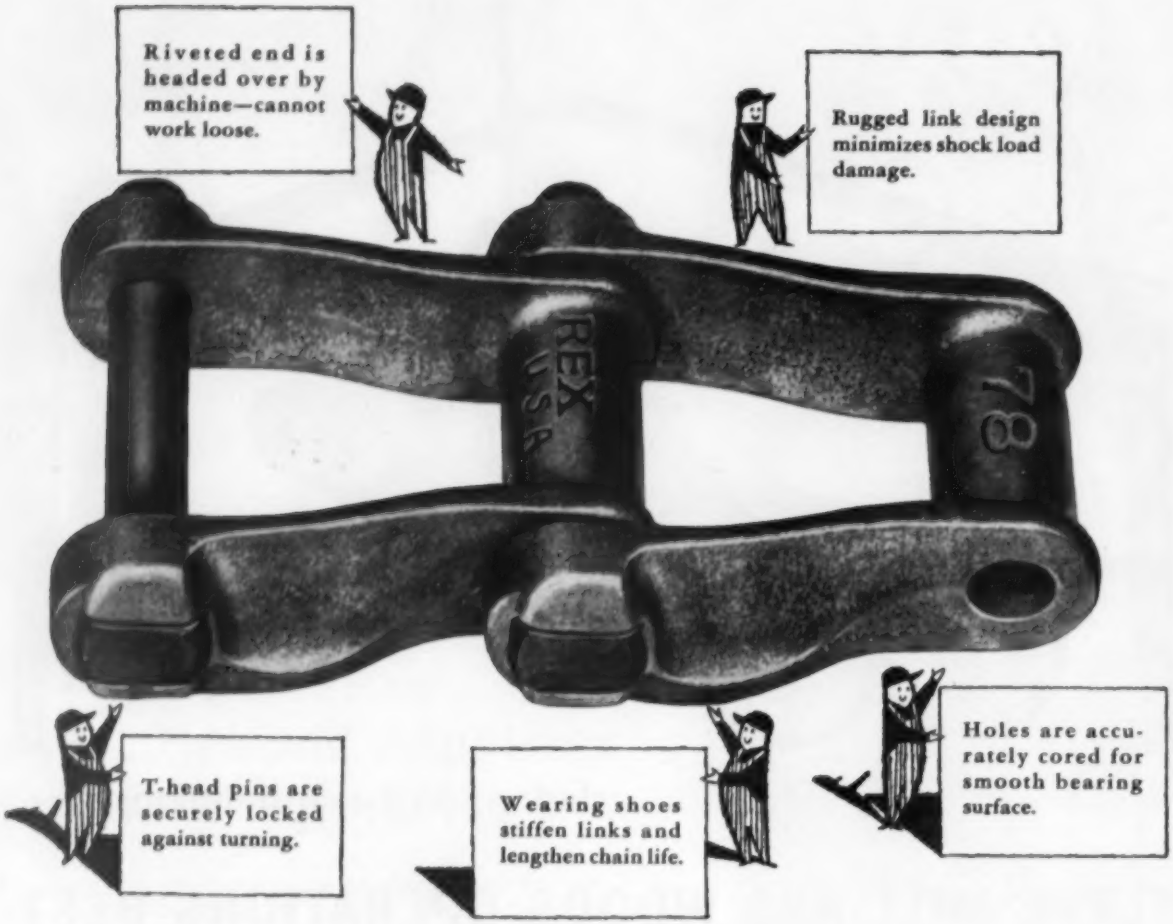
Soulé
LEADER IN STEEL BUILDINGS

Inquire about low-cost Soulé Buildings for your lumber application.

SOULÉ STEEL COMPANY

San Francisco 1750 Army Street, VAlencia 4-4141
Los Angeles 6200 Wilmington Avenue, LUdlow 5-0911
San Diego 1975 Fifth Avenue, BEImont 2-1071
Portland 2630 N.W. St. Helens Road, CApitol 3-5154
Seattle 4100 West Marginal Way, HOlly 3600
Spokane East 41 Gray Ave., Riverside 7-8063
Phoenix 2026 South 11th Avenue, ALpine 3-3178
Salt Lake City 220 Greyhound Bldg., EMpire 3-7601

4181


Riveted end is headed over by machine—cannot work loose.
Rugged link design minimizes shock load damage.
REX
U.S.A.
78
T-head pins are securely locked against turning.
Wearing shoes stiffen links and lengthen chain life.
Holes are accurately cored for smooth bearing surface.

sawmill work horse

Rugged as it looks and reinforced at just the right places to shrug off the wear and shock impacts of lumber mill service, you'll find Rex® H-Type Mill Chain your number one choice for feeding your saw carriages and transferring duty to your edgers, trimmers or sorters. The service is tough, and this riveted mill chain is tougher. The result: Rex reliability plus Rex stamina equals Rex economy.

Rex H-Type Mill Chain as illustrated above is available in malleable iron or wear-defying Z-metal in all required sizes. In many applications it is used plain; standard attachments make it adaptable to trimmer table or slasher service.

For Rex H-Type Mill Chain and for the many other conveyor and drive chains used by the forest products industry, see your CHAIN Belt District Sales Engineer or Distributor. You will be served rapidly and efficiently from local stock. CHAIN Belt Company, 4653 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

Your ONE source for a complete line of power drive and conveyor chains, sprockets, roller bearings, flexible couplings.

"15 MFB per man per day – yarding, 25 MFB per man per day – loading, with our TL-15 TRAKLOADER®

That's the report from Everett Christian of the Christian Logging Co., Springfield, Oregon. With the TRAKLOADER and a five-man crew they yard out an average of 75,000 feet per 8-hour day, decking the logs along the road. When loading, it takes only a three-man crew to keep up that 75,000 feet per day average.

Christian needs a machine that can travel the steep, rough roads at a good clip and set up a yarding or loading side quickly, right on the road, without bothering about clearing or rigging a tree. That's why he uses two model TL-15 Washington TRAKLOADERS.

The Christian Logging Co. uses the Trakloader both for yarding and loading in the straight-up-and-down country near Detroit Dam, Oregon. Yarding, (above) the Trakloader reaches out 750 feet to bring fir and hemlock to the hot deck along the road, heeling the log without removing the choker or butt rigging. Switching from butt rigging to tongs, the Trakloader loads the decked logs onto the trucks (below).

See for yourself, visit a TRAKLOADER operation. If you want the location of the nearest show, specifications or use of a color film, contact your Washington dealer or write to Washington Iron Works, 1500 Sixth Ave. South, Seattle 4, Wash.

Everett Christian says, "In this extremely rough terrain the Trakloader has proven itself. We use it for loading and to yard those sides where lack of room made it impossible to rig up the donkeys."

WASHINGTON IRON WORKS

There is only one 'TRAKLOADER'

The Washington TRAKLOADER®

Standard Engineer's Field Report

CASE HISTORY
LUBRICANT *RPM Delo Oils*
FIRM *McGrew Brothers, Medford, Oregon*

Logging trucks work 4 years in mud, dust, and snow without a single bearing failure

FROM LOGGING SHOW TO MILL is a rough 40 miles for McGrew Brothers fleet of B-61 Mack trucks. Four units like one above haul 20-ton payloads through mud, deep dust, or snow, 12 hours a day, five days a week. Mr. E. E. McGrew, partner in the firm, says, "Our trucks take a real beating. But RPM DELO Special Lubricating Oil helps us hold maintenance and replacement costs to a minimum. In the four years we have used this oil, we have never lost a bearing." "RPM DELO" Special is also used in all other equipment—four pickup trucks, two crew wagons, two water wagons, two loaders, and four Caterpillar-built tractors; three D-8's and a D-7. One of the D-8's went 5,000 hours before overhaul and, after inspection, four of original pistons were put back in service. Mr. McGrew designed unique push-arm rig (above), used to unload trucks and stack logs on cold deck.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

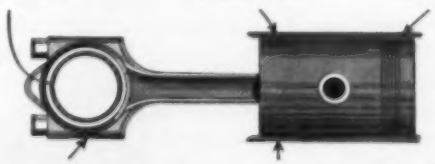
FOR EXPERT HELP on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative, or write to 225 Bush Street, San Francisco, California.

Why RPM DELO Oils prolong engine life

Special compounds stop corrosion

Anti-oxidant resists lacquer formation

Detergent keeps parts clean



Inhibitor resists foaming

Metal-adhesion qualities keep oil on parts in running or idle engine

STANDARD OIL COMPANY OF CALIFORNIA

significant industry news

MERGER OF ST. PAUL & TACOMA, ST. REGIS . . . Another big forest industry merger is in the making. Official announcement has been made that plans for a merger of St. Paul & Tacoma Lumber Co., Tacoma, Wash., with St. Regis Paper Co., are being developed. St. Paul has extensive timberland holdings and operates on a sustained yield basis. It has large sawmill and planing mill in Tacoma, and a large Douglas fir plywood plant at Olympia, Wash. St. Regis has extensive eastern operations, a paper plant in Tacoma, Wash., and recently acquired through a merger the widespread holdings of the J. Neils Lumber Co., in Montana and Washington.

NEW B. C. PLYWOOD PLANT . . . A new firm, Inland Wood Products, plans construction of a $2.5 million plywood plant at Princeton, B. C. John Nylund, owner of Western Pine Lumber Co., Ltd., at Princeton, is a major figure in the development. The new company would take over Western Pine activities.

WORLD'S LARGEST FLAKEBOARD PLANT . . . A multi-million dollar flakeboard plant, said to be the largest in the world, will be built at Farmville in Pitt County, North Carolina. Plans for the plant were announced by Kenneth C. Towe, president of American Cyanamid and D. J. O'Connor, president of Formica, a subsidiary of American Cyanamid. Completion is anticipated early in 1958.

NLMA PICKS ACTING EXECUTIVE V-P . . . Richard G. Kimbell, nationally known building code and wood utilization authority, is now acting executive vice-president of the National Lumber Manufacturers Association. Kimbell, NLMA vice-president of technical services since 1954 and a veteran of 38 years' service with the association, will act in place of Leo V. Bodine who resigned to accept the position of vice-president in charge of timber and lumber operations for the Diamond Match Co. at Spokane, Wash. Kimbell's experience with NLMA includes 20 years as director of the organization's technical and standards department.

G-P NAMES NEW V-P . . . William H. Hunt, formerly a vice-president in sales and a director and member of the executive board of U. S. Plywood Corp., has been named vice-president in charge of plywood and specialty sales for Georgia-Pacific Corporation. He succeeds James L. Buckley who becomes vice-president of development and research, aide to the president G-P on special projects and president Georgia-Pacific Alaska Co.

J. NEILS PERSONNEL CHANGES . . . Important personnel changes have been made at J. Neils Lumber Co. as the result of it becoming a division of St. Regis Paper Co. Paul Neils, formerly president of J. Neils, becomes a chairman of the board of the Neils division and a director of St. Regis. He is succeeded as president by W. H. Rathert, formerly general manager of the Neils operation at Klickitat, Wash. Rathert, who has been with Neils since 1922, assumes his new duties March 1. Mark Schoknecht becomes a vice-president of Neils and will take over as logging manager, succeeding George Neils who retires March 1 as logging manager at Libby, Mont. Walter Neils, general manager at Libby, will retire not later than January 1, 1958, and will be succeeded by Alfons J. Agather. However, both Walter and George Neils will continue as consultants.

WEYERHAEUSER ADDING CONTAINER FIRMS . . . Merger of two paper container companies — Keickhefer Container, Camden, N. J., and Eddy Paper Corp., Chicago, Ill. — into Weyerhaeuser Timber Co., now awaits only approval of stockholders of the two companies. The merger will be accomplished by issuance of Weyerhaeuser shares in exchange for stock of the two companies.

RICHARD D. ROSEBERRY has been named chief forester for the Diamond Match Co., according to Robert G. Fairburn, president of the company. He will advise all divisions of the company on matters of forestry practices and timber procurement and will be responsible for establishment of a company-wide policy on forest management. Roseberry was employed by Diamond in 1947 to re-inventory its timber holdings. In 1948 he was appointed chief forester of the company's California operations. The promotion necessitates another personnel change. Charles Arment, formerly assistant chief forester to Roseberry, becomes manager of timber lands, California operations.

CLARENCE W. HAPP, a member of the lumber business since 1920, and president of the White Star Lumber Co., Chicago, Ill., for the past 12 years is retiring. He will continue in a consulting capacity with the firm for two years. Happ, who has been with White Star since 1935, has sold his stock interests in the firm to Vernon G. Brown who becomes president, and Frederick W. Mueller, the new vice-president.

I. F. DOWNER is retiring from the Hallack & Howard Co., Denver, Colo., after 57 years of service. He has served as chairman of the board since 1950. Downer joined the firm in 1899 following graduation from the University of Denver, and initially was a traveling salesman. He became credit manager and secretary of the firm in 1903 and vice-president in 1922.

ROBERT DOLLAR LUMBER CO., Glendale, Ore., took over management of Multnomah Plywood Corp.'s veneer plant on February 15. The sale does not include about 50 million feet of timber in the area owned by Multnomah. However, this timber will be sold later. Multnomah plans to add another shift to increase veneer production in its Portland plant. The veneer plant at Glendale is located on the Robert Dollar mill pond.

ALGER-SULLIVAN LUMBER CO., long-time sawmill operation at Century, Fla., is selling its assets to Scott Paper Co., Koppers Co., St. Regis Paper Co., and International Paper Co. Complete liquidation is expected. This firm, organized in 1900, produced 24 million feet of lumber in 1956. Its timber holdings exceed 2000 acres.

URANIA LUMBER CO. has placed in operation a new oak flooring plant at Urania, La. It is a straight-line rip operation which will produce 120,000 lineal feet of flooring a day. Two cross-ventilated kilns have been installed to assure correct drying of lumber before flooring manufacture. Superintendent of the installation is Sam J. Brown. Urania had added another cylinder to its creosote treating plant and plans to construct a Wohlman process plant in 1958 at which time it will be able to purchase output of eight sawmills in the area to supplement its own forest production.

CROSSETT COMPANY, Crossett, Ark., has underway a planting program which will place about 3.5 million new trees on now idle lands in Arkansas and Lousiana. The pine stocking will cover between 3500 and 4000 acres. About 9 million seedlings will be given to landowners on a matching basis; about 500,000 will be planted by the company on outside lands, and the remainder on company holdings. In the past seven years, Crossett has been responsible for planting almost 23 million pine seedlings.

ROBERT MORRIS, formerly with Ohio Match Co., at Coeur d'Alene, Ida., has been named administrative expediter for Pack River Tree Farm Products, Spokane, Wash.

HALLACK & HOWARD LUMBER CO., now entering its 80th year, has re-elected U. R. Armstrong as president. Just a year ago Armstrong was elected president after serving for 41 years in the company's mill in Idaho. Other officers elected at the directors' annual meeting were F. G. Coldren, a veteran of 31 years with Hallack & Howard, and R. G. Downer, vice-presidents; H. F. Phelps, secretary; S. R. Trythall, treasurer. Re-elected to the board were Wm. A. Flogaus, Chicago, and Charles W. Fischer, head of the special millwork division and a 45-year veteran with the firm.

GEORGE VAN VLEET of Seaside, Ore., has purchased two mill operations and timber in Humboldt County, Calif., for an estimated $3 million. The purchase includes the Sugar Pine Lumber Co., Hoopa, a band mill cutting 100,000 feet a day of Douglas fir, sugar pine and cedar, and the Arcata Manufacturing Co., Arcata, a remanufacturing plant. General manager of both installations has been E. W. Spalding. Timber involved totals about 7000 acres. Van Vleet operates plants in Arcata and owns timber south and east of Cannon Beach, Ore.

ARTHUR D. RUFF has been named general sales manager of the wholesale division of Edward Hines Lumber Co. Ruff has been active in the lumber business since 1927, has been with Hines since 1951. Prior to the present appointment he headed up the wholesale hardwoood sales.

GEORGIA-PACIFIC CORPORATION has completed reorganization of personnel at the Hammond mills in California and the following appointments at managerial levels have been announced. D. D. Dashney, formerly executive vice-president of Coos Bay Lumber Co., also acquired by G-P, becomes manager of sawmills for the entire Hammond operation. Ray A. Talvola, 29 years with Hammond, becomes controller. Gray G. Evans, a veteran of 23 years with Hammond, is placed in charge of all timberlands and logging operations with the title of logging manager. The possibility of a plywood operation at the Hammond location is being studied and long range plans may include utilization of waste for the manufacture of pulp and paper.

COQUILLE DIVISION, TEXTRON, INC., has named William C. Ulett to the post of executive vice-president in a move to establish a national sales organization for the Coquille, Ore., plywood operation. Ulett was formerly president of Sierra Plywood Distributors, San Francisco, a firm he founded five years ago. The sales force formerly associated with Ulett in the Sierra firm will now represent Coquille and headquarter at 525 Market Street, San Francisco.

WALTER PURCELL, president of the Tillamook Veneer Co., Tillamook, Ore., will construct a shake mill employing 30 men at Garibaldi, Ore. Purcell has purchased the Channel Lumber Co., located in the same area as the proposed shake mill, and will continue to operate it as a stud mill. It will be operated by its former owners, Richard and James Riecher, Tillamook.

W. J. SHELTON, formerly resident manager of the new Kraft pulp and paper mill now being built at Toledo, Ore., by Georgia-Pacific Paper Co., has been named a vice-president of the firm. He joined G-P a year ago after serving as superintendent of pulp and paper manufacture for the Longview Fibre Co., Longview, Wash. Construction on the Toledo mill is on schedule, should be completed in a year. The plant will have a daily capacity of 250 tons of unbleached kraft pulp, paper and container board. Raw material will come from chips made from residues from adjacent G-P sawmills and plywood plants at Toledo, and neighboring sawmills.

SIDNEY A. HATCHER is retiring from Simpson Logging Co., Shelton, Wash., after 32 years of association with its sawmill and logging operations. Hatcher has served as manager of log distribution for the firm since 1947. Hatcher joined Simpson as an accountant at the first Reed sawmill on July 16, 1925, the day the mill cut its first log.

NOR-CAL LUMBER CO., Crescent City, Calif., has obtained an option to purchase the entire sawmill facilities of the Pioneer Lumber Co., also in Crescent City. Announcement of the move was made jointly by Al Burdick, general manager of Nor-Cal, and J. R. Hulbert, Jr., president of Pioneer. It is expected that Nor-Cal will exercise the option within 60 days.

THOMAS MUNROE, president of the Moraine Box Co., Dayton, O., was elected president of the National Wooden Box Association at its annual meeting held in Boca Raton, Fla. F. B. Joy, president of the Ace Box Co., Denver, Colo., was elected vice-president. Re-elected were Arthur Temple, Jr., Temple Associates Box Factory, Diboll, Tex., vice-president; John M. Nelson, III, The Nelson Co., Baltimore, Md., vice-president; C. D. Hudson, Washington, D. C., executive vice-president; H. R. Hudson, Washington, D. C., secretary; and P. John Galbraith, John Galbraith, Philadelphia, Pa., treasurer.

J. FYFE SMITH CO., LTD., Vancouver, B. C., has been named a member of the Philippine Mahogany Association, Walter G. Scrim, president of the association, reports. James Fyfe Smith established his Vancouver firm in 1904 expressly to import Australian hardwood lumber and piling and was responsible for the introduction of these timbers to North America.

WILLIAM C. ANDERSON has been appointed general manager of lumber marketing for Hardwood Corporation of America at Asheville, N. C. Anderson has broad experience in the manufacture of hardwood lumber and related products and has specialized in recent years in assisting large consumers to increase lumber utility.

SIMPSON REDWOOD CO., San Francisco, Calif., has opened new sales offices in Minneapolis, Minn., Cleveland, O., Kansas City, Kan., and Atlanta, Ga. E. G. Davis, sales manager for Simpson Redwood, reports the following heads for the offices: William Pettet and Harold Renfort, both from the San Francisco office, at Minneapolis and Kansas City, respectively; Gregory Lambert, formerly with Simpson at Arcata, at Cleveland. The Atlanta post will be filled later.

PALMER & PARKER COMPANY, Boston, Mass., has named Alfred M. Blakesley as assistant sales manager. In announcing the appointment, B. O. Gerrish, president of Palmer & Parker, said the newly-created position is part of the firm's expanding sales and promotional department.

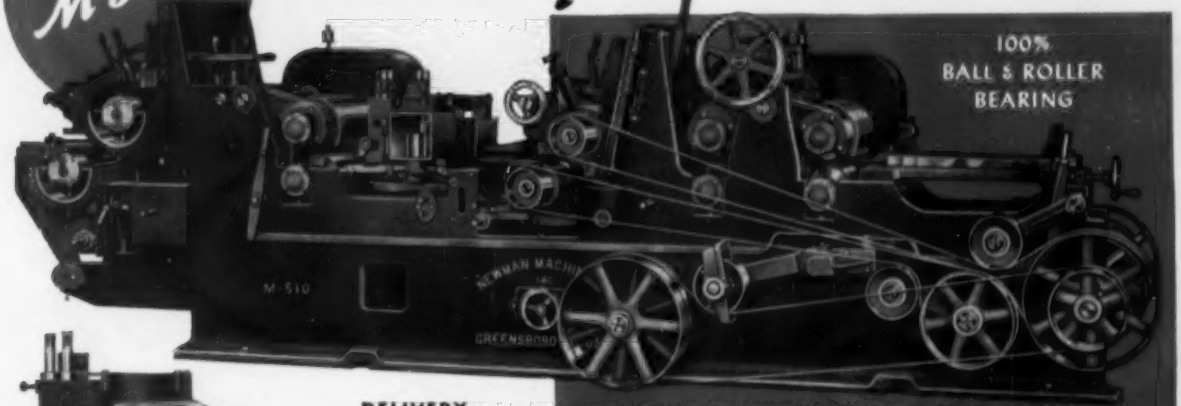
LUMBER REQUIREMENTS for the highway program voted by congress in 1956 will run about 600 million board feet in each of the next 13 years. Estimates by the Bureau of Public Roads say the multi-million dollar program will require about 7.2 billion feet of lumber.

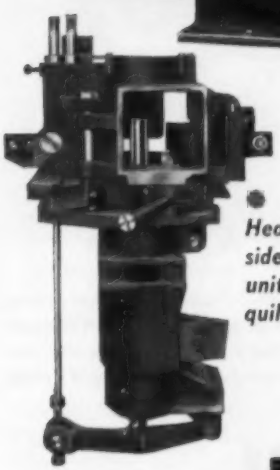
SOUTHERN HUMBOLDT LUMBER CO., Pasadena, Calif., has purchased the Fairhurst Lumber Co. sawmill and planing mill at Carlotta, Calif. This purchase includes only the mill; Fairhust will continue its wholesale activities and manufacturing operations in the Ft. Seward area. The Carlotta mill was the first to produce ties and studs from Douglas fir in Humboldt County.

A New 10″ Roll PLANER & MATCHER with feeds to 250 feet per minute

Newman M-510

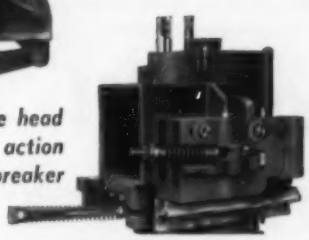
A medium priced machine with every desirable feature



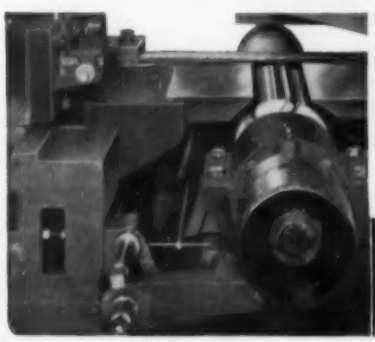


DELIVERY FROM STOCK *IF YOU HURRY*

- *Heavy duty side head units of long quill design*



- *Left side head double action chipbreaker*



- *Massive vibration free bed plate after bottom cylinder*

- Simultaneous roll raising device for front bottom feed rolls
- Quick release for pressure bar
- Quick release for left side head
- All Sprockets steel—heat treated
- Flame hardened bottom bed plates and pressure bar
- Feed works reversible
- Wear resistant rigid solid steel long guide
- Chatter proof jointer units
- Roller knife setting gauge available

Newman Machine Co., Inc.
GREENSBORO, NORTH CAROLINA, U. S. A.

Two round trips... 240 miles a day... with payloads averaging 8,000 board feet of Douglas fir or larch from the State of Montana timber sale on Whale Creek—that's the job for this and four other Macks owned by the Rex Brown Lumber Company of Coram, Montana. It's a hauling job where...

stamina pays off!

Mr. Rex Brown is very positive about why he uses only Macks. "They don't tear out rear ends. I have never had a Mack rear end or transmission go on me yet...and I have had plenty of trouble with other makes of trucks in this respect."

To Mr. Brown, Mack-built differentials and transmissions are representative of the outstanding performance and dependability of Mack trucks. Winter and summer, day after day, his Macks stay on the job with only routine servicing . . . clocking thousands of repair-free, safe, and profitable miles. Mr. Brown is sold on Macks because the success of his tough hauling operation depends on their unmatched performance.

Stamina and inherent hauling economy are paying off for Mr. Brown... and they can do the same for you when you use Mack trucks—trucks whose engines are often good for 200,000 miles before overhaul . . . whose frames, axles, and transmissions commonly stand up for more than a million miles. Let your Mack branch or distributor give full details. Mack Trucks, Inc., Los Angeles, Denver, San Francisco, Seattle, Portland, Salt Lake City, Albuquerque.

MACK
first name for
TRUCKS

4558

How 22-B Transit Crane puts ZIP into logging

This highly mobile, fast-working, thoroughly reliable Bucyrus-Erie crane-excavator hurries from landing to landing, handles woods or mill operations with speed and efficiency, and produces steady high output with a minimum of downtime for maintenance and repairs. Skidding, loading or unloading trucks, handling logs or finished lumber in the mill yard, building and maintaining haul roads, or handling cleanup and other intermediate jobs, the 22-B Transit Crane can step up your entire schedule. Check the features below, then see your nearby Bucyrus-Erie distributor or write direct for additional information.

SPEED — The transmission has a two-speed auxiliary unit to augment the five-speed main unit providing 10 speeds forward, two reverse. Maximum speed is 31 mph. This makes both short and long moves practical, lets you work widely separated landings more profitably.

MOBILITY — Constructed of welded steel to take the stresses of crane and excavator service and to provide a stable foundation for fast operation, the Transit Crane's rubber-tired mounting has an overall width of eight feet over tires and a *turning radius of 33 feet.* Consider the advantages of close-quarter maneuverability in selective logging, for example, where you work several landings and shorten skidding distances to bring out more logs. The Transit Crane simply moves in closer to the felled logs to maintain the accelerated production.

CONVERTIBILITY — Outstanding front-end versatility that has proved so popular on hundreds of different Transit Crane jobs in varied markets brings equipment economy into your logging budget. The logging boom can be replaced by shovel or dragshovel front end or by a standard crane boom for long-reach log handling and clamshell or dragline service.

393E56

BUCYRUS ERIE

SOUTH MILWAUKEE, WISCONSIN

HOW RCI CAN HELP PUT YOUR
REICHHOLD SEATTLE PLANT NOW ALSO PRODUCING

PLYWOOD "ON TOP OF THE WORLD"

fast delivery of RCI Adhesives

gets *your* orders out on time!

● It takes a lot of big orders to roof in America's millions of new homes . . . to put plywood "on top of the world". . . and also into sheathing, floors and myriad other construction applications everywhere.

RCI helps you fill those big orders by offering fast delivery on all kinds of adhesives for all kinds of plywood. We can do this because RCI plants are located in Seattle, Washington . . . Azusa and South San Francisco, California . . . Tuscaloosa, Alabama . . . Charlotte, North Carolina . . . Elizabeth, New Jersey . . . Ballardvale, Massachusetts . . . Detroit, Michigan . . . Argo, Illinois . . . Port Moody, British Columbia . . . Ste. Therese, Quebec. From these plants and other offices we can also give you wide technical assistance when the need arises.

RCI OFFERS A FULL LINE OF ADHESIVES — RCI manufactures the basic chemicals, formaldehyde and phenol. This means a dependable source and uniform quality for *phenol-formaldehyde resins* and *urea-formaldehyde resins*. RCI also supplies resorcinol resins, and both *soybean glues* and *casein glues*. Call on RCI for all your adhesive needs.

REICHHOLD

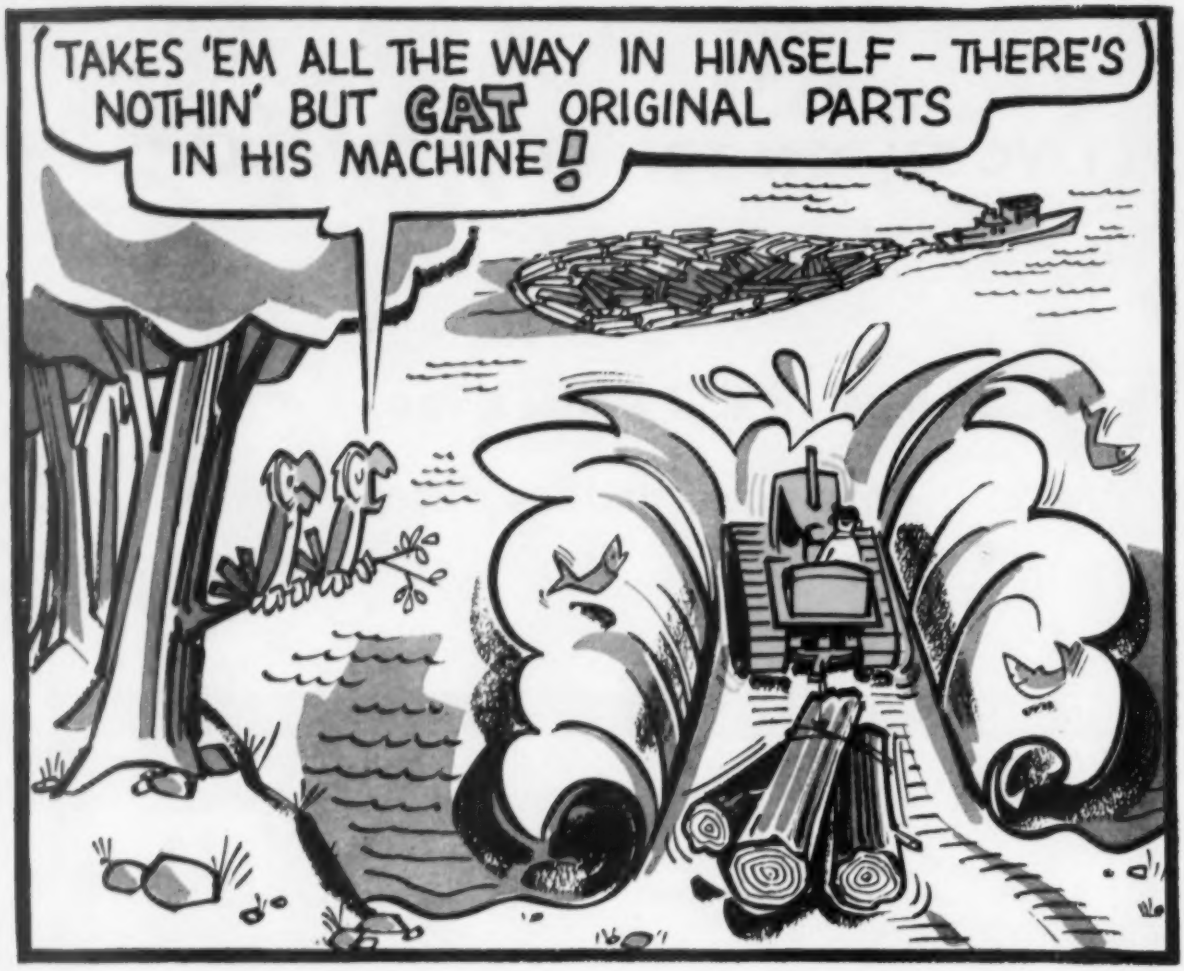
Synthetic Resins • Chemical Colors • Industrial Adhesives • Plasticizers
Phenol • Formaldehyde • Glycerine • Phthalic Anhydride
Maleic Anhydride • Sodium Sulfite • Pentaerythritol • Pentachlorophenol

REICHHOLD CHEMICALS, INC., RCI BUILDING, WHITE PLAINS, N.Y.

Creative Chemistry . . . Your Partner in Progress

RCI

RCI PENTA FOR WOOD PRESERVATIVES!



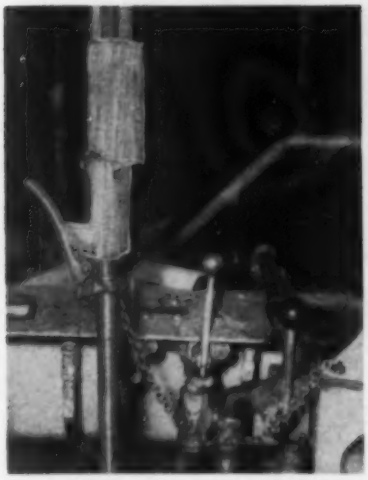
Are you aware of the BIG THREE in CAT* bellows seals for idlers, track rollers and final drive? You get special, long-lasting FACING MATERIAL . . . just the *right* amount of CONTACT PRESSURE at the mating surfaces . . . and HEAVY DUTY DIAPHRAGMS to resist bursting and tearing. Each BIG THREE feature was *developed* and *proved best* for Cat-built Tractors. If it's a "look-alike" seal, who knows? Be sure to get parts you can trust—from your Caterpillar Dealer. He has *exactly* the part you need.

Caterpillar Tractor Co., San Francisco, Cal.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

Safety Engineering



DEVICE IN "FULL-OFF" POSITION.

DEVICE IN "FULL-ON" POSITION.

"NOW THERE'S A NICE STAND OF TIMBER!"

How To Control Barker Knives

• A two-way locking "gadget" which provides a positive locking device on the knife controls for a Nicholson barker has been devised by Pacific Pine Co., Ltd., New Westminster, B. C. The device was designed by company personnel manager and safety director Virgil Arnold.

The knife control on this barker is an auxiliary finger-grip on a "joy stick" or control handle. The distance toward the center of the log that the knives will travel is regulated by the squeeze pressure exerted on this grip by the fingers. The grip returns to "full open" position when pressure is released.

This knife control handle is sensitive to touch and there is always the chance that while someone is making repairs or carrying on maintenance around the machine that a person in the operator's cage might brush against the handle, causing knife movement which might crush a worker's fingers.

The device consists of two lengths of pipe, of proper diameter, welded together parallel so that the two pipes can be placed over the control handle. one on the main handle and one on the movable finger-grip. This holds the knives in "full-on" or extended position.

On one section of pipe, about twice as long as the other, is welded a metal fin. This is shaped and scaled to fit against the knife-control handle to hold it in "full-off" position, when the gadget is reversed from the "full-on" position.

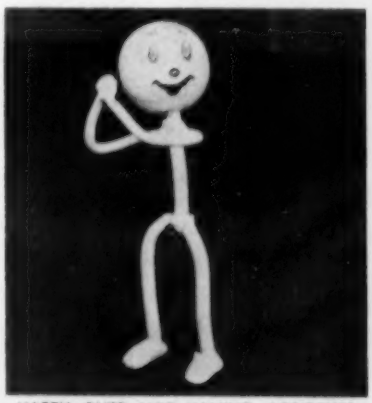
Knives thus can be held securely in either "full-on" or "full-off" position. The device is painted a bright yellow for maximum safety visibility by workers. It must be removed deliberately before knife positions can be changed.

Safety Sam Dramatizes Safety at Cascades Plywood

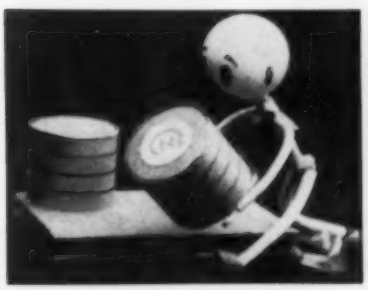
• "Safety Sam," an effective manniken dreamed up by Cascades Plywood Corporation, Lebanon, Ore., has helped put over safety at that plant.

According to R. G. Smith, personnel director, Sam is used to illustrate accidents and accident causes. He appears regularly in the company's house magazine "The Hot Press," having made his debut in January, 1955. In each issue he simulates pictures of industrial accidents that have occurred since the previous issue appeared.

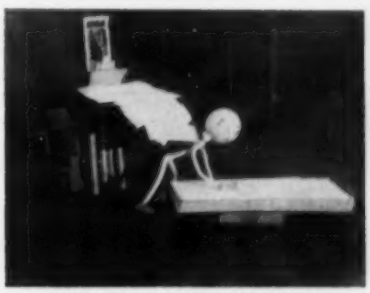
The company tries to show in each of Sam's poses the phase of the accident that will have the most impact on other employees, especially those working on a similar job. Even though the poses might be exaggerated, they get over the principal point — what caused the accident. "Safety Sam" lends his talents to this objective and is more effective than many words. We show Sam doing his stuff in the accompanying photos.



HAPPY OVER NOT HAVING ACCIDENTS.



SAM BRUISES HIS SHIN.



PALLETS FALL ON HIS BACK.

PALLET FALLS ON HIS LEG.

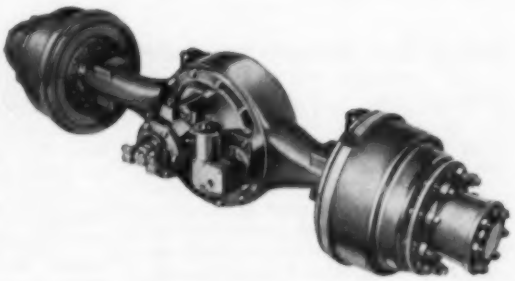
IN EATON 2-SPEED AXLES

REDUCES STRESS AND WEAR

ADDS TO AXLE LIFE • CUTS MAINTENANCE

KEEPS TRUCKS ON THE JOB • LOWERS OPERATING COST

Eaton's exclusive planetary construction distributes gear-tooth loads over four "planet" gears, holding stress and wear on any one gear tooth to a minimum. Completely locked out in the high speed range, these four gears rotate only slowly in the low speed range. The result is quiet operation, easy clash-free shifting, minimum wear, materially longer axle life. This rugged planetary design, plus forced-flow lubrication enables Eaton 2-Speeds to establish outstanding performance records. Eaton 2-Speeds also reduce stress and wear on engines and all power transmitting parts; they make it possible for trucks to haul more, quicker, longer, at lower cost.



More than Two Million Eaton Axles in Trucks Today. For complete information, see your truck dealer.

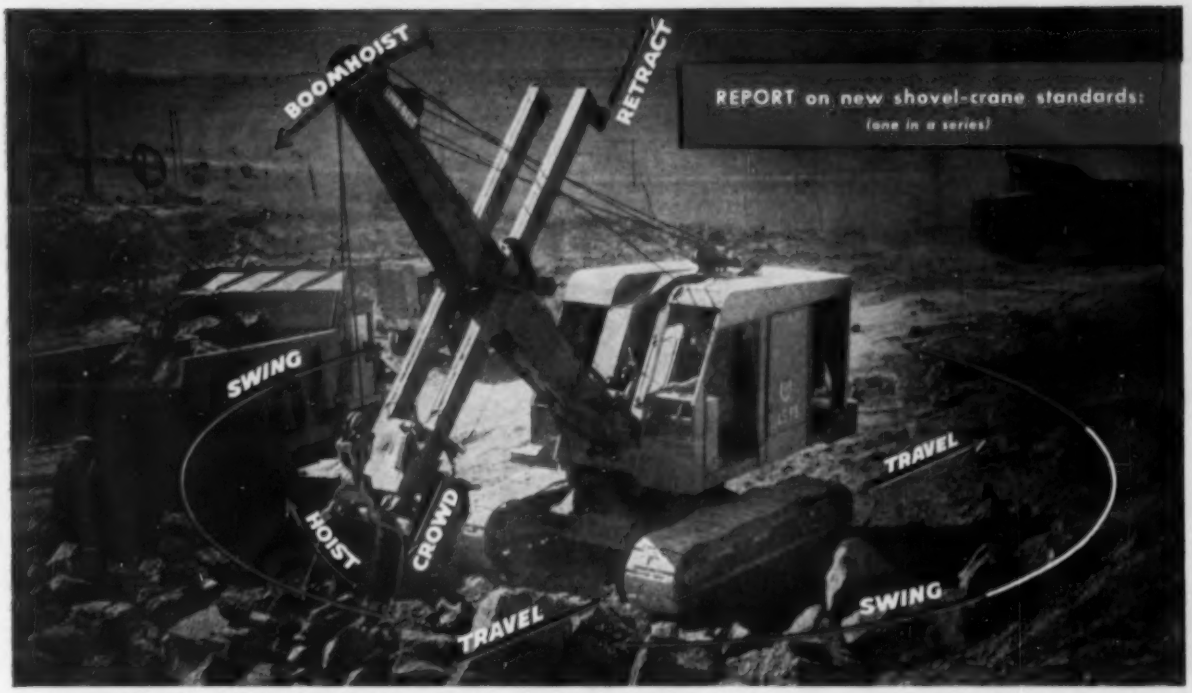
EATON

AXLE DIVISION

MANUFACTURING COMPANY

CLEVELAND, OHIO

PRODUCTS: Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Hydraulic Pumps Motor Truck Axles • Permanent Mold Gray Iron Castings • Forgings • Heater-Defroster Units • Automotive Air Conditioning Fastening Devices • Cold Drawn Steel • Stampings • Gears • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers



ALL OPERATIONS ARE COMPLETELY INDEPENDENT — In addition to eliminating shifting time, *Independent-Travel* allows the operator to swing and hoist the load while travelling. Whether to save time or to jockey the boom around obstacles, the operator can swing the boom while his machine is travelling in either direction. This optional feature can be used with any front-end attachment.

Getting 9 hours' output in 8

Independent-Swing-and-Travel is available on 11 Link-Belt Speeder models. Eliminates shifting, saves 20-30 seconds each move

Link-Belt Speeder users are setting new high-production standards by equipping their machines with *Independent-Swing-and-Travel*. Why? It eliminates time losses ordinarily occurring when the operator shifts from swing to travel and from travel to swing. With *Independent-Travel* shifts are eliminated . . . and the machine can swing and travel simultaneously.

If you'd like complete details, proof that *Independent-Travel* can up output . . . cut maintenance and parts cost—see your Link-Belt Speeder distributor or write Link-Belt Speeder Corporation, Cedar Rapids, Iowa.

14,520-L

MORE USABLE HORSEPOWER — Size for size, Link-Belt Speeder log-loaders utilize more of the engines' available horsepower. This bonus pays off in added power at the drums, greater line pull plus extra power to swing, hoist and travel. Although it gets more usable power and line pull out of the same engines used in other log-loaders, a Link-Belt Speeder remains well within the engine manufacturers' recommended operating speeds.

It's time to compare . . . with

LINK-BELT SPEEDER

Your Factory-Trained Sales and Service Specialists

WESTERN MACHINERY CO., Spokane, Wash.

HOWARD-COOPER CORP., Seattle, Wash., Portland, Eugene, Albany, Roseburg, Central Point, Coquille, Ore.

WESTERN EQUIPMENT CO., Boise, Twin Falls, Pocatello, Idaho Falls, Idaho and Ontario, Oregon

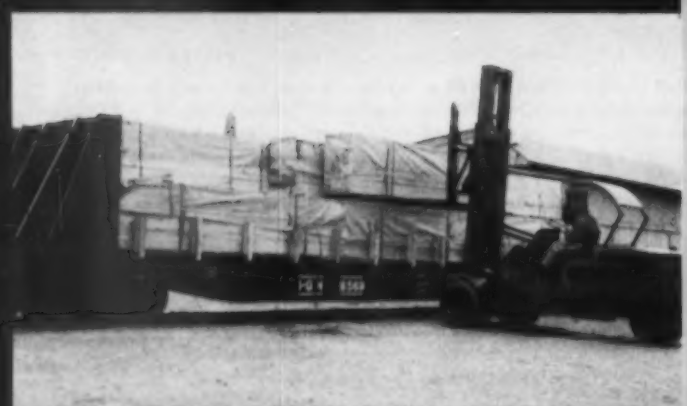
EDWARD R. BACON CO., San Francisco, Sacramento, Oakland, Fresno, Calif.

MONTANA POWDER & EQUIP. CO., Helena, Billings, Mont.

PURVES RITCHIE LIMITED, Vancouver, B.C.

ACME STEEL **STEEL STRAPPING** bundles logs into compact units, doubling storage pond capacity. *(Idea No. U6-8)*

ACME STEEL **STEEL STRAPPING** packages hardwood doors for damage-free shipping. *(Idea No. S2-11)*



ACME STEEL **STEEL STRAPPING** lumber into packages cuts loading, unloading time to minutes. *(Idea No. U2-2)*

AIM* for better handling, protection, storage

You can gain important materials handling, protection and storage advantages by applying Acme Steel unitizing and carload bracing Ideas to your operations. Safe, secure packages and shipments result in increased handling speed and labor-materials economies, bringing you important savings and greater customer satisfaction. It's easy to find out how.

Located near your plant is an Acme Idea Man thoroughly experienced in product protection for the forest products industry. He is immediately available to discuss your specific problems and provide hundreds of performance-proved Acme Steel Strapping Ideas, without cost or obligation. The seven Ideas on these pages are included among the Ideas-In-Action Reports your Acme Idea Man will be glad to show you. Among these many Reports—all of which have been developed from actual experiences of dozens of industries—are certain to be Ideas that can be applied to your problems, for better, faster, more economical product handling, protection and storage.

Your *Acme Idea Man can be contacted at the nearest Acme Steel Company office. Simply look under "Steel Strapping" in your classified telephone directory, or send the coupon for full facts and information.

ACME STEEL **STEEL STRAPPING**

ACME STEEL **STEEL STRAPPING** bundles flooring into secure packages for faster, safer handling. *(Idea No. 52-9)*

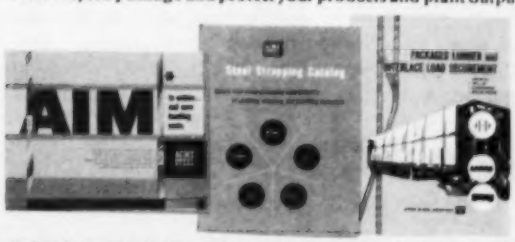
ACME STEEL **STEEL STRAPPING** packages and secures lumber for safer, faster shipment. *(Idea No. U2-1)*

ACME STEEL **STEEL STRAPPING** packages lumber for full utilization of mechanical handling equipment. *(Idea No. U1-11)*

ACME STEEL **STEEL STRAPPING** unitizes and braces plywood for carload movement. *(Idea No. U1-10)*

3 IDEA BOOKS

These three information packed Acme Steel Idea Books are available to you on request. They will provide dozens of clues to better ways to package and protect your products and plant output.



Write today for your choice of the above three Acme Steel Idea Books. Merely indicate the books you want on the coupon at the right and mail. Your request will be filled promptly, with no obligation.

Acme Steel Products Division
ACME STEEL COMPANY, Dept. I.B.S.–37
4903 Pacific Blvd., Los Angeles 58, Calif.; San Francisco; Seattle; Portland

Please send me the new Acme Steel Idea Books I have checked below:

- ☐ Steel Strapping Catalog
- ☐ Unitizing Catalog
- ☐ Packaged Lumber and Interlace Load Securement
- ☐ Have an Acme Idea Man call.

Name_____

Title_____

Company_____

Address_____

City_____ Zone____ State_____

Full-scale logging operations handled by just one OLIVER OC-12

Here at the E. D. Barter logging operation at Deming, Washington, the only piece of power equipment is this Oliver OC-12 diesel tractor. Called upon to handle practically all the heavy work, dependable performance is of first importance.

Steadiest assignment is skidding logs to a landing and transferring from one landing to another where it is inaccessible by truck. These Douglas fir logs average 3 ft. in diameter and 24 ft. in length. With its 53 drawbar h.p., the OC-12 handles volumes up to 2000 board feet at a single turn with this shop-built arch. It is also equipped with a Carco E winch for loading operations and a straight blade for road-building projects.

Says owner E. D. Barter, "We are pleased with our OC-12. It does an excellent job and requires a very minimum of attention."

Have you seen the new OC-12 in action? With POWER-TURN? If not, ask your Oliver Distributor to show you what it adds to your speed and maneuverability in handling logs and other jobs. Two separate, yet connected, systems of control enable you to make sharp or gradual turns with *full power on both tracks at all times*. You'll give it top rating for your logging operations, too. It's easy to buy, easy to maintain, and above all, dependable.

Call your Oliver Distributor today. Or write us for literature.

OLIVER

THE OLIVER CORPORATION

400 West Madison Street, Chicago 6, Illinois

a complete line of industrial wheel and crawler tractors and matched allied equipment.

One of the Note family's Diamond T's with Cummins diesel engine and Fuller 10-speed 10-B-1120 Transmission . . . on logging operation out of Medford, Oregon.

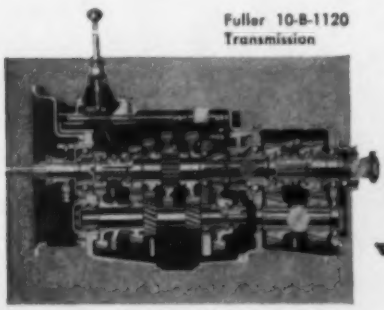
Fuller 10-speed Transmissions help Notes keep logs rolling FAST!

The Note family of Medford, Oregon is in perfect harmony on the choice of 10-speed Fuller 10-B-1120 Transmissions for its grueling logging operation. The mother, Mary V. Note, and the three brothers, Harry S., Roger J. and Raymond R. Note, chose Diamond T tractors with Cummins diesel engines and Fuller Transmissions to keep the logs rolling . . . on three daily round trips from cutting areas 75 miles back in the hills to the ever-hungry sawmills in Medford.

Say the Notes: "It takes plenty of horsepower, applied to the road efficiently, to keep the 6000 board feet loads moving on schedule. We find the 10-speed Fuller Transmissions are easy to shift . . . give us the right gear ratios to bring the logs in faster, at lower cost." Private logging roads . . . rough, with steep grades as much as 12%, and sharp turns . . . offer a challenge met successfully day in and day out by the Notes' operation.

Fuller 10-B-1120 Transmissions are especially designed for extra heavy duty logging work . . . where loads are heavy, grades steep, and the stress of constant shifting and heavy loading severe. The Notes find that Fuller 10-B-1120 Transmissions help them set new records for dependability, low maintenance costs and fuel mileage in their operation. The Notes perform all routine preventive maintenance on their logging fleet.

Wherever the "going's tough" . . . specify Fuller Transmissions to deliver high torque, with the *right* gear ratios at the *right* time.



Fuller 10-B-1120 Transmission

FULLER MANUFACTURING COMPANY
Transmission Division, Kalamazoo, Michigan

Unit Drop Forge Division, Milwaukee 1, Wisconsin • Shuler Axle Company, Louisville, Kentucky (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, California and Southwest District Office, Tulsa 3, Oklahoma.

Whenever the skyline is busy, the Stacker moves in and quickly dozes big logs from the off-highway trucks.

Logs which do not go directly to the bucking areas are quickly sorted and decked as much as ½ mile away.

At the Hollow Tree Lumber Company...

LETOURNEAU ELECTRIC ELEPHANT

Big redwood and fir logs pour into Hollow Tree's mill at Annapolis, California, by off-highway truck — and emerge as lumber at better than 100,000 board feet per day. Getting these logs sorted in decks and dealt out to the hungry saws in the proper grade and species at the proper time is a job for a giant! For that job, Hollow Tree uses the big and tough LeTourneau Electric Log Stacker.

At a grueling pace, 9-hours-a-day, this versatile log handler unloads trucks and loads trailers, sorts to the proper decks, feeds two bucking areas, and makes quick work of other jobs where elephantine power is called for. Together with a small lift truck it feeds logs to the mill table and builds up a deck of bucked logs to keep the mill humming.

LONG HAUL FROM DECKS

The topography at Hollow Tree's mill "B" forces location of some cold decks 700 to 800 feet away from the mill approaches. The Stacker's ability to shuttle 40-foot logs back and forth to these decks, 3500 to 4000 board feet per trip, is the key to the pell mell pace set by this busy mill. Even in seasons when these decks are all but isolated by heavy, deep

Here's a big log that's fit only for pulp. When enough of these accumulate, the Stacker loads them out.

In addition to other chores, the Stacker builds an extra deck of bucked logs to assure continuous operation of the mill.

Powered steel tusks assure a safe trip across the rutted mill yard.

"SHUFFLES AND DEALS"

mud, the big LeTourneau Log Stacker barely slows down in its job of dealing logs to the proper decks and bucking areas.

ELECTRIC POWER DOES THE JOB

Power and versatility for complex mill yard operations like that at Hollow Tree Lumber Co. is possible only with the exclusive LeTourneau System of Electric Power and Control. This system—in which all machine functions are independently powered by individual electric motors — brings full power of a big diesel-electric power plant into focus directly on the job of handling big loads.

Precise control of the Stacker's boom and forks speeds up the job of feeding bucked logs to the mill table.

SEE IT IN ACTION

LeTourneau Electric Log Stackers are working today not too far from you. Ask your LeTourneau distributor to show you one in action . . . or let him show you the new sound film, "Giant In The Yard." In it you'll see how Hollow Tree and other mills have solved the problem of moving heavy log loads fast, anywhere in their yards. For free literature on the Stacker, just mail the coupon below..

Employment Opportunities

LeTourneau Logging Equipment Division is currently expanding its staff of logging specialists: Sales Management, district representatives, field engineers, service men. If you have a background of successful, productive experience in this field and you are looking for an opportunity where you can move up, send your qualifications to Mr. Hobson Tune in care of our Logging Equipment Division.

LETOURNEAU LET EQUIPMENT R.G. LETOURNEAU INC

L-126

Logging Equipment Division
2542 South MacArthur, Longview, Texas
Send me your folder describing the Electric Log Stacker.

Name_____

Firm_____

Address_____

City and State or Province_____

Keep costs light on heavy hauls

Hauling heavy loads puts a severe strain on engines—often means unscheduled overhauls and above-normal maintenance costs. Keep your engines on the job longer by lubricating with one of the famous *Texaco Ursa Oils*—you'll get consistently dependable performance and avoid unnecessary upkeep costs.

Texaco Ursa Oils keep engines clean, free from harmful deposits—assure free piston rings and proper valve action. The complete line of these great oils is especially refined and processed to make diesel and heavy duty gasoline engines deliver *more power* with *less fuel* over *longer periods* between overhauls.

For chassis bearings, use *Texaco Marfak*. It won't jar or squeeze out, gives top protection against wear and rust. In wheel bearings, use *Texaco Marfak Heavy Duty* to prolong bearing life for thousands of extra miles, with no seasonal change required. *More than 650 million pounds of Texaco Marfak have been sold!*

In crawler mechanisms, use *Texaco Track Roll Lubricant*. It seals out dirt and moisture, reduces wear and maintenance costs.

Let a Texaco Lubrication Engineer help you increase profits and lower costs through effective lubrication. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants and Fuels
FOR THE LUMBER INDUSTRY

TUNE IN . . . METROPOLITAN OPERA RADIO BROADCASTS EVERY SATURDAY AFTERNOON

VOLUME 84

The Lumberman

NUMBER 3

FEBRUARY 25, 1957

Lumber Industry Needs More Salesmen

WHAT'S AHEAD in housing?

Lumber manufacturers, still hanging on the ropes from an economic tussle with a private residential construction slump in 1956, are looking with some apprehension at 1957's forecasts. At the moment, these indicate no more than about a million starts. And tight money seems certain.

The figures are now in for 1956's housing starts. These show a level about 17 per cent down from the 1955 annual rate of 1,309,500. Partially offsetting this decline in units constructed was the increase in size and value of the average house, together with an approximate five per cent increase in building costs. The value of new construction was thus only 10 per cent below the 1955 level, thanks partly to inflation.

You can attribute the slowdown in starts to any number of factors, either softening of demand, a tight mortgage money market or larger down payment requirements. Long range outlook for housing is good, beginning again in about 1960, when a new baby crop will demand shelter. The federal highway program may result in some housing starts as a result of right-of-way clearing through blighted residential areas. But that doesn't help the sawmill man turning out lumber in 1957.

EVEN IF HOUSING starts go up again, lumber is still in for a rough show in building markets of the future. Not that the product isn't good. Rather, it's sin of omission and not of commission. Collectively, the lumber industry still is guilty of not selling its product properly, even though some companies and associations are doing a splendid job. The industry doesn't tell people lumber is good and it doesn't merchandise its product effectively.

We fall down on the "lumber dealer" level. We don't realize yet that this key man in our mill-to-market distribution pattern is now a "building materials" dealer selling competitive products. We invest thousands of dollars in automated sawmill equipment, train experts to run our machines and then let an untrained, unqualified and uninspired man sell that product to the consumer at the retail level. No wonder we take a beating.

One national building magazine recently took a long look at America's architectural landscape of 1977, which isn't too far off if you're planning to make long range capital investments.

THE CRYSTAL BALL showed strange and new types of architecture. It showed, too, booming use of plastics, finding increasing application as light interior paneling, insulation and other uses. "Sandwich" walls will be used more widely. Their "skins" can be sheet metals, plastics, plywood or glass. The core can be expanded metals, wood particle or fiber boards or combinations of these. There isn't much lumber in this new chemical world, and other wood products, some fiber derived, are also creating competition.

The lumber industry is entitled to its just share of building markets. But it won't get them by merely making boards and shipping them helter-skelter to distribution points. Letting lumber languish in bins without someone to extol its unexcelled properties won't win markets in competition with more aggressively merchandised building materials.

The retail lumber dealer, too, is facing a profit squeeze. A cost of doing business survey recently released by Dun and Bradstreet, Inc., showed that the typical retail lumber dealer during 1955 made a net profit of $3.40 before taxes on each $100 worth of net sales. In 1950, the comparable figure was $5.80. Among the 297 dealers included in the survey, 75.4 per cent reported a sales gain in 1955 over 1954 and 24.6 per cent reported a sales decline.

NET PROFITS BEFORE taxes were 3.7 per cent of net sales for yards selling to contractors, compared to 2.9 per cent for those selling to individuals. Concerns which did 50 per cent or more of their business on a cash basis were those selling principally to individuals.

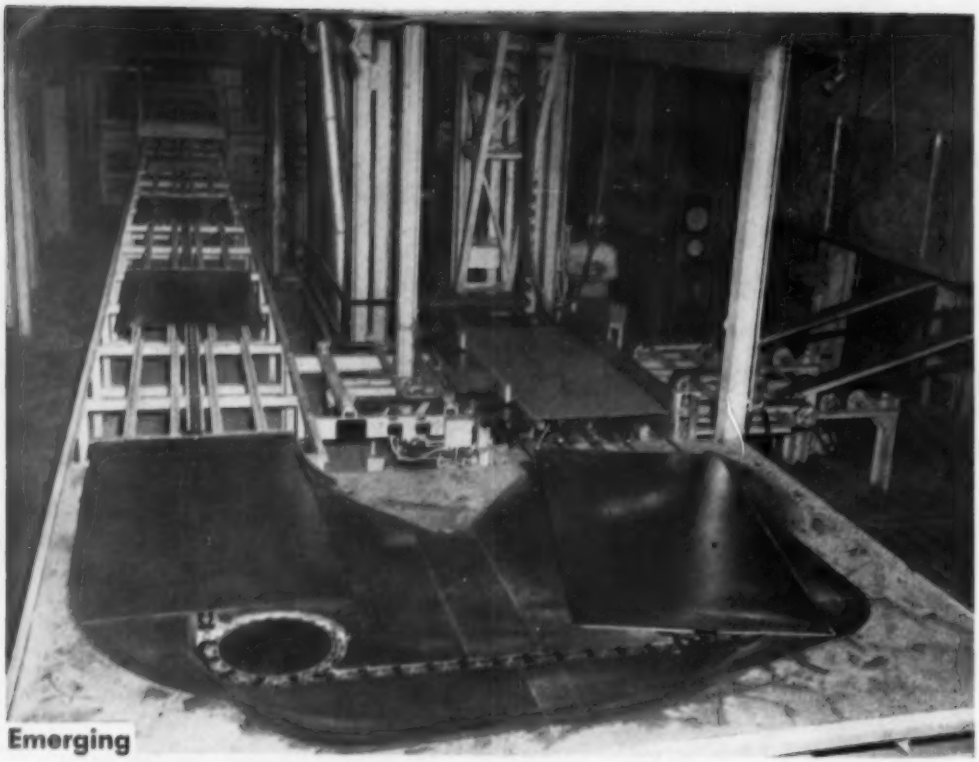
What can you, the lumber manufacturer, do to help the lumber dealer fight increasing costs and sell more lumber?

- You can make a better product, precision cut, so lumber can have the distinction of being accurately dimensioned, a uniform building material.

- You can package this product, as is being done by other building materials manufacturers. To some extent, we must get away from costly piece by piece handling and selling.

- You can train the lumber dealer to be a salesman, inspired by the advantages of using lumber. This means even more intensive work through our trade associations at the dealer level, backed up with effective consumer advertising, expertly prepared end-use pamphlets and brochures, and building plans and facts and figures on lumber as a building material.

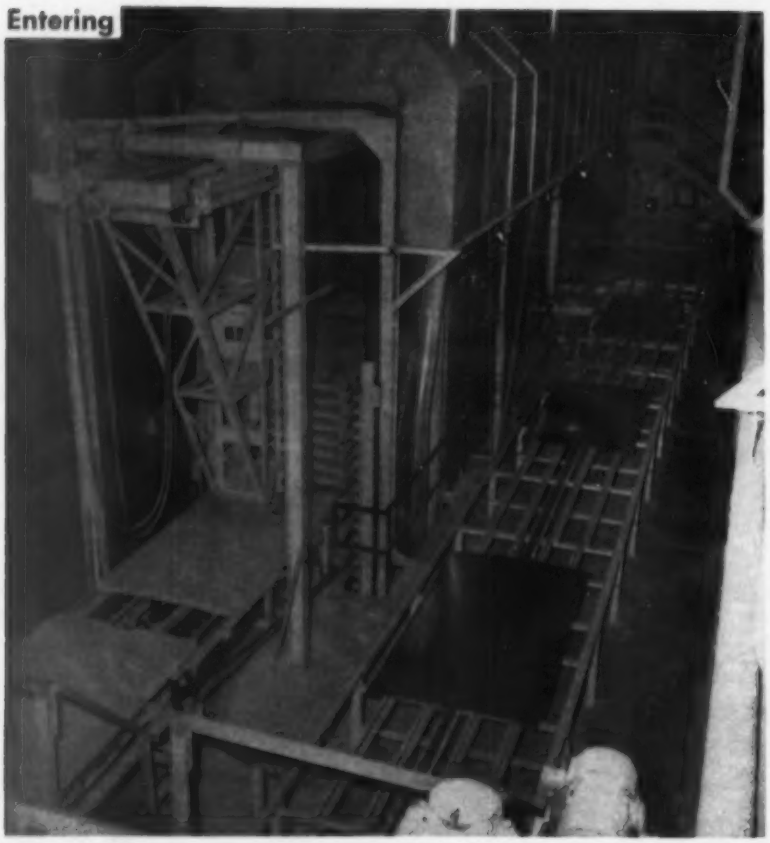
No one will give you your share of the big housing market. You must win it by performance, not by complacency.



Emerging

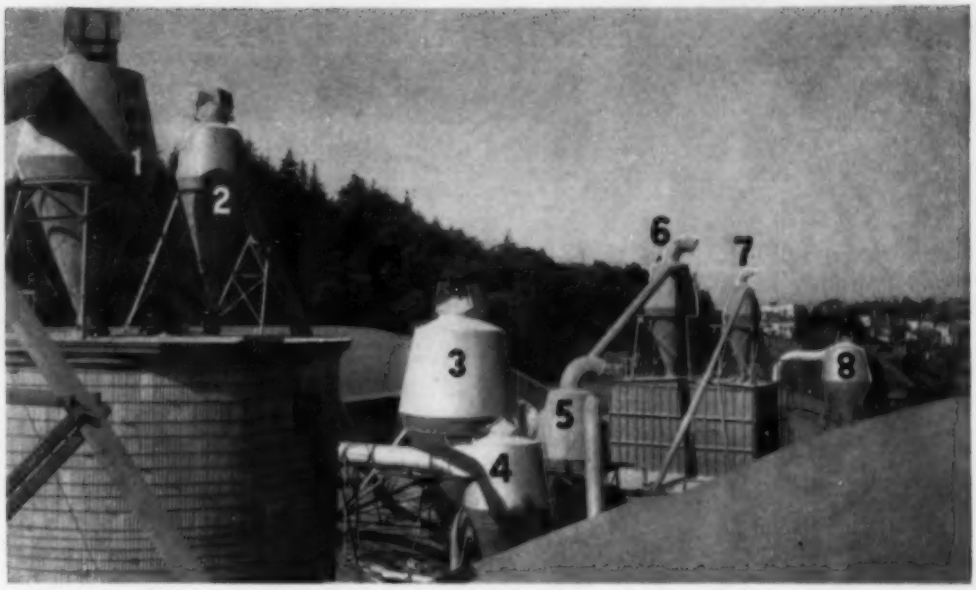
MERRY - GO - ROUND system which returns aluminum cauls, foreground, from discharge end of Columbia press to head end where they receive new mat formed material. Panel shown here is ready to feed to automatic stacker at right. In the middle distance is Oilgear pump for hotpress. Press unloads to American receiver which offbears onto merry-go-round chain system carrying cauls back to head end of mat forming machines.

Entering



HEAD END mat forming system returns aluminum cauls, right, from discharge end of press to be fed back for new mats (L) which go to American loader serving 20 opening Columbia hot press.

CONCRETE SILO holds raw material for plant. Silo at top receives shavings from planing mill.



CYCLONES by National Blower on roof of 100x300 ft building indicate progressive steps in manufacturing process. No. 1 receives green planer shavings from No. 1 or No. 2 planers, discharges into silo; No. 2 receives sawdust from Greenlee cutters and splitter saws, discharges into silo; No. 3 receives green shavings from No. 1 stage dryer. This material is in process of drying. Discharges into No. 2 stage dryer; No. 4 receives dried shavings from No. 3 stage dryer, discharges into hammer mill; No. 5 receives dried chips from hammer mill, discharges into No. 1, No. 2 and No. 3 screens; No. 6 receives dried chips from screens-accepted material for particle board manufacture, discharges into accepted chip bin; No. 7 receives fines from screens, discharges into fines storage bin; No. 8 receives shavings from No. 2 stage dryer, discharges into No. 3.

Particle Board Plant Uses More Planing Mill Shavings

Weyerhaeuser Timber Company operates new utilization unit at North Bend, Oregon

PARTICLE BOARD, fast becoming a major member in the family of secondary wood products derived from chippable milling residues, now helps round out Weyerhaeuser Timber Company's program of more complete wood utilization. The company has its first operation at North Bend, Ore., where a surplus of fuel made the raw material supply logical.

The board is produced on a three shift basis, with fir planer shavings from the company's sawmill facilities as the raw material. Plant capacity doesn't utilize all these shavings, formerly used for boiler fuel, but does divert a large supply to greater economic use.

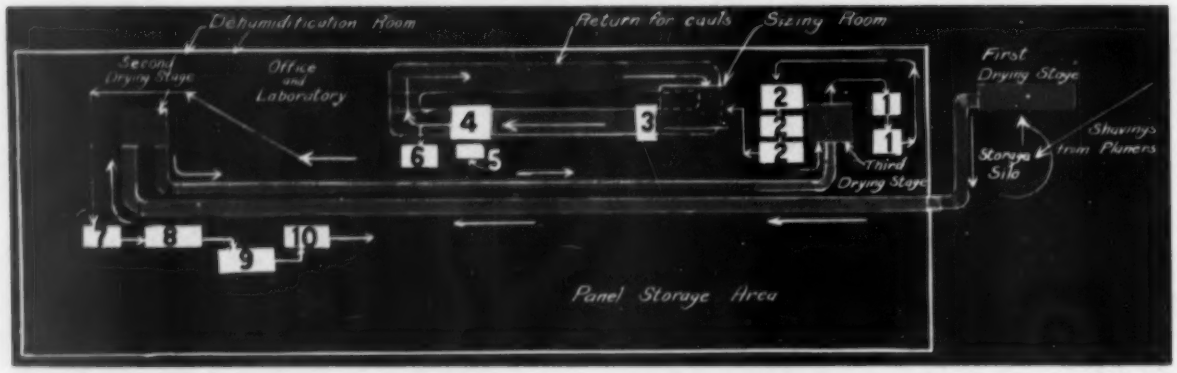
The accompanying flow chart shows highlights of the manufacturing process and the principal equipment involved.

Features of the board making process are:

• Three drying stages are used after the planer shavings are blown from the planing mill into a concrete silo. All drying stages employ cyclones located on the roof of the manufacturing building (see accompanying photo). Steam heated air introduced at each drying stage is vented through these cyclones. This blower system effects longer suspension of the shavings in dried air, which produces more rapid and uniform drying. In case of fire, live steam can be introduced through a steam quenching valve.

• Shavings drop from the cyclone of the third drying stage to two hammer mills on the ground floor level. These reduce them to particles about one-quarter inch in size. The particles are

IN QUALITY CONTROL lab of Weyerhaeuser Timber Company's particle board plant. From left, Steve McEntee, manager Dave Isaacson (seated), Charles Gill and Ken Goodman (seated at desk).

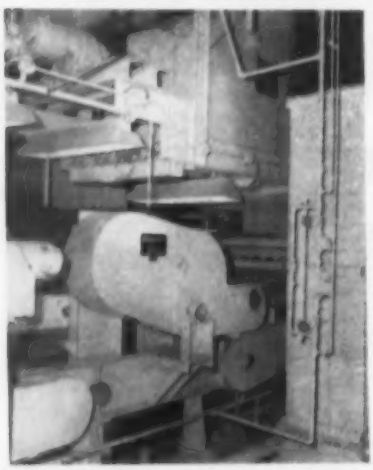


DIAGRAM, not to scale, shows approximate flow of material in manufacture of particle board at Weyerhaeuser Timber Co. plant. Process starts at extreme right with shavings, which go through 3 drying stages, then pass through processing machines shown above.

Principal Equipment

NO. 1, Jeffrey pulverizers, bottom unit is 24 x 20, top is 36 x 48; **NO. 2,** three **Tyler** 5 x 10 screens; **NO. 3, Miller-Hofft** mat forming machine; **NO. 4, Columbia** 20 opening steam heated hot press, served by **American** charger and unloader; **NO. 5, Oilgear** pump; **NO. 6,** company-designed **American** stacker; **NO. 7, Lawrence** panel feeder; **NO. 8, Greenlee** skinner saws; **NO. 9, Greenlee** cutoff saws; **NO. 10, Yates-American** sander.

Other mill equipment includes: **National Blower & Sheet Metal** pipe for cyclones and pipes; **Merrick Weightometer** in mixing room; **Miller-Hofft** feed units in bin on roof, with **U. S. Motors** driving worm feed drives; **Miller-Hofft** equipment in mixing room; **Robbins** and **Myers** one-ton overhead hoist in mixing room; **Reeves** pumps; **Link-Belt** rollers; **Western Gear** speed reducers; **American** blower systems; **American-Marietta** adhesives; Socal Petrolatum No. 110 by **Standard Oil.**



MILLER-HOFFT mat forming equipment. Resin and glue sprayed shavings are fed onto cauls.

blown back into a roof cyclone.

• Three vibrator screens, located on a floor above the hammer mills, are fed from the roof cyclone and make three sorts: fines, overs and acceptable stock. Overs blow back to the hammer mill. Fines are piped outside and shipped out, to be utilized for making wood flour and glue extender.

• Acceptable screened material passes from the screens to surge bins on the roof. Here stock is metered down to the mixing room (above ground floor level), into a Weightometer. This checks amount of material going to the mixers. Stock is sprayed with urea-formaldehyde resin (in first vat) and then with Petrolatum wax (in second vat below). Mixers have paddles mounted on long shafts. Two sets of mixers are used. Resin comes from outside storage.

• Surge tank above mat-forming machine feeds coated particles to the machine, located on ground floor level. Particles are screw-fed onto 4x8 foot cauls passing on slow belts through the machine. A light pre-press is applied to the particles before the mats go into the 20 opening steam heated hot press, on an automatic loader.

• Panels emerging from the hot press discharge on an automatic unloader and thence go by power rolls to a belt feeding a company-designed stacker. The cauls return to the head end of the mat forming machine, on a merry-go-round chain system. This stacker has

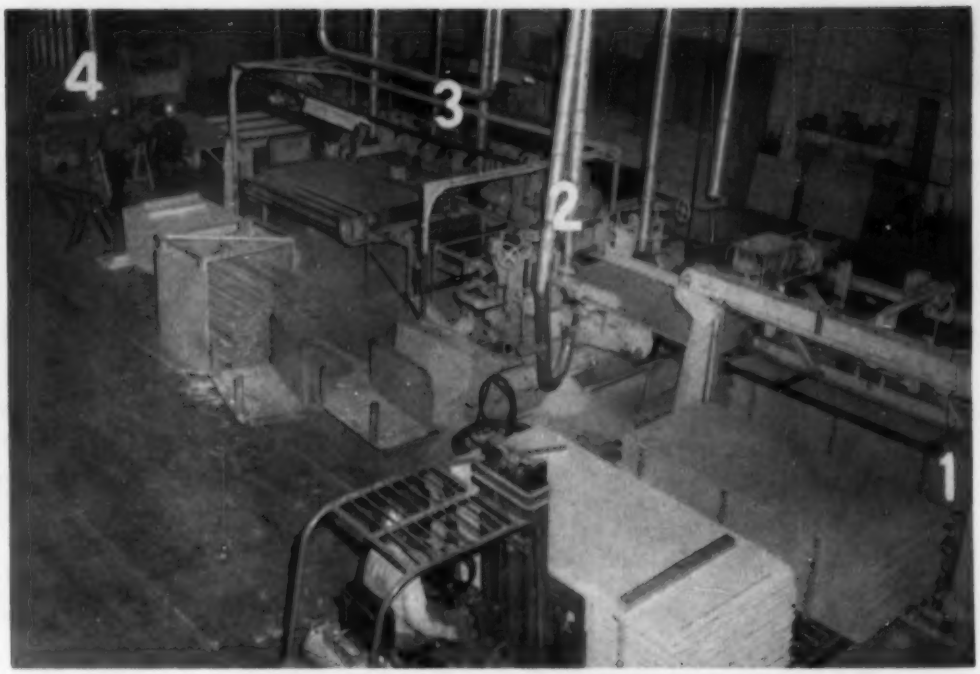
Plant Personnel

MANAGER: Arthur O. Karlen.
PLANT SUPT.: Dave Isaacson.
CONTROL CHIEF: Charles Gill.
QUALITY CONTROL: Richard Jordan, Jay Howarth.

Plant employes 16 men per shift, on three shift basis. Four men are used on board preparation: preparation operator, glue mixer, mat forming operator and press operator.

THREE TYLER 5x10 vibrator screens which make three sorts: the shavings needed for manufacturing process, the fines and the overs.

TWO JEFFREY pulverizers prepare final material for use. From pulverizers, particles are fed to two Tyler 5 x 10' vibrator screens.



FINAL STEPS of processing after material leaves dehumidification room. No. 1, Clark lift trucks bring panels to Lawrence automatic feeder. Stickers are deposited as panels feed through. No. 2 is Greenlee sizing saw. No. 3 is Greenlee cut-off saw. This has an automatic stop shoe on transfer table to hold feed. No. 4 is Yates-American 4 drum sander.

arms which swing up, pick up the three stickers placed between each two boards; arms then drop the panel on the pile, then repeat the process of picking up another set of three stickers.

• Panels are dehumidified in two curing rooms. This equalizes stresses before panels are sized and sanded.

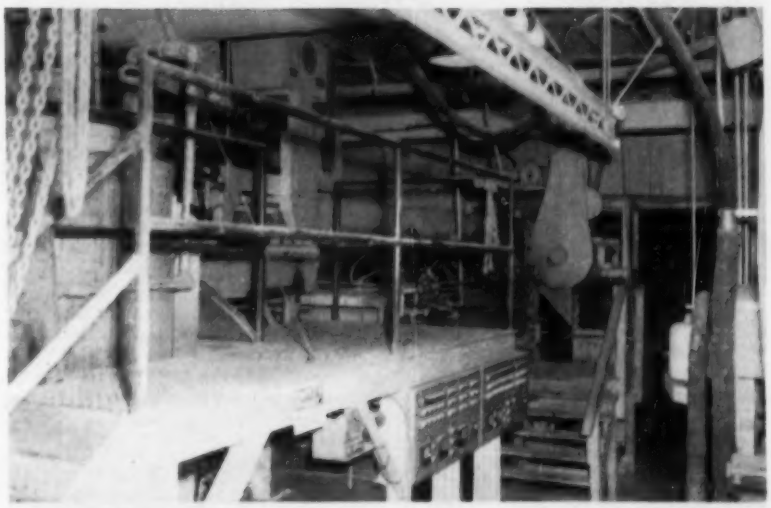
• Final manufacturing equipment consists of the skinner, cut-off saws and the sander. An automatic panel feeder starts the panels lengthwise through the sizing saws; lift trucks handle the packages. Panels can be made into smaller than 4x8 foot panels with splitting saws on the sizing saw operation. Skinner trims are hogged at the machines, blown back to the shaker screens for reintroduction as raw material. Automatic solenoids control each step of sizing and sanding, halt feeder belts until next machine ahead is empty, so no jamups occur.

Quality control is a strict function at the Weyerhaeuser plant and is applied continuously from the mixing room on through the manufacturing process, with tests being made on the final product in the plant laboratory.

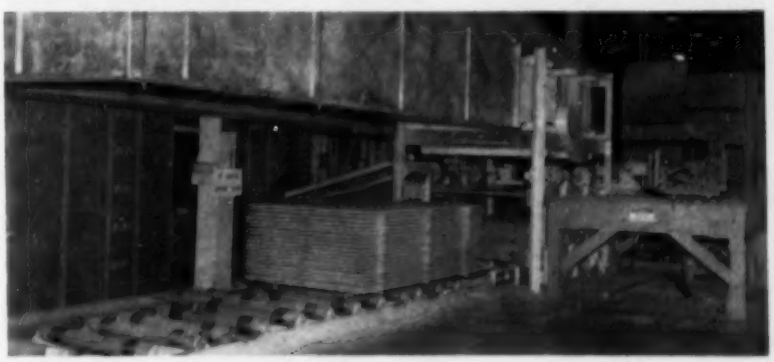
Board Characteristics

The product is used as base stock to be surfaced with formica or other plastic overlays. Principal service is in furniture, restaurant counter tops, table tops, sinks, etc.

Majority of production is 4x8 *stock. Fourteen styles of boards, in thicknesses from ¾ to one inch, are produced. Weight and density determine style.*



GLUE MIXING ROOM has two mixers which are used interchangeably. Mixing equipment is Miller-Hofft and Merrick; blower system metal work by National Blower and Sheet Metal Co.



AUTOMATIC STACKER designed by Weyerhaeuser Tbr. Co. engineering dept., Tacoma, takes panels from discharge end of Columbia hot press and stacks them for delivery to humidification rooms.

TWO 8' BANDMILLS have 150-hp. motors, carry 13-gauge saws, are 48' long and 14" wide with sliver-tooth back. Each have 12" steam feed air dogs, air set. All equipment in co.'s hardboard sawmill made by Prescott Co., Menominee, Mich. (Photo: Brown Co.)

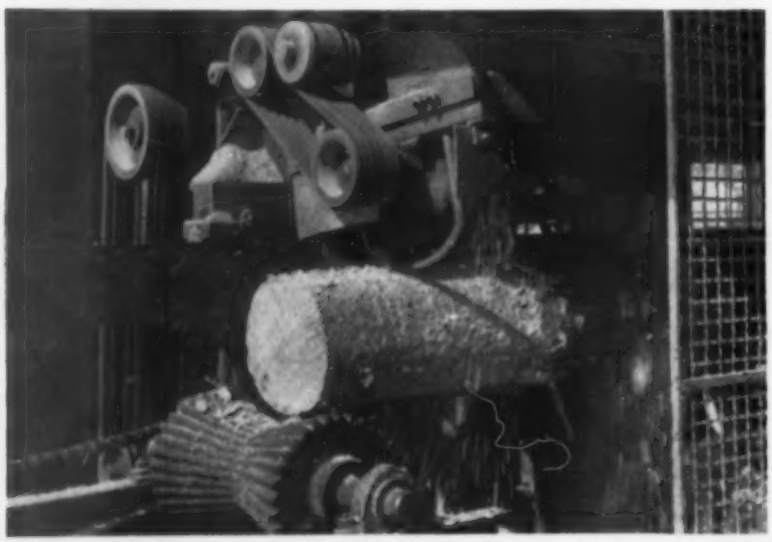
Hardwood Mill Maintains Quality Lumber Production

Brown Company in New Hampshire, started in 1826, produces 20M board feet yearly.

THE HUM OF SAWS and the whine as they slice through hardwood and softwood logs makes good music.

It means that Brown Company at Berlin, New Hampshire, is making the fullest use possible of the trees that grow on its timberlands.

The long, straight logs—best in the woods—move to the sawmills to be cut into high grade lumber. Bark-free chips are cut from slabs and edgings for the pulp mills.



LOGS GOING into Brown Co.'s sawmills first have bark removed by Soderhamn D-3 50 hp. flail debarkers. This permits cutting barkfree chips from slabs and edgings for use in pulp mills.

Sawing lumber is a tradition in Brown Company.

In 1826, a group of Portland business men formed a partnership under the name of H. Winslow and Company and erected a sawmill with one gang and two single saws. That was the beginning of a firm that was later to grow into the present Brown Company.

Brown Company's sawmills in 1955 turned out 20,800,000 board feet of hardwood and softwood lumber.

THE HARDWOOD SAWED at the mill consists mainly of birch, and maple, and is used for making all types of fine furniture, pianos, floorings, etc.

Straight-grained red birch is used in making piano key stock and hammer stock, and the 4½-inch thicknesses, for piano frameworks.

During World War I, hardwood was used for making airplane propellers.

Hardwood is shipped by freight car or large truck to areas such as Massachusetts, Michigan, California and Oregon. Some shipments are sold locally—others are exported, principally to England.

About 75 men make up the crews of the two sawmills. They include sawyers, setters, resawyers, edgermen, saw filers, trimmers, graders, millwrights and foremen.

The flail debarker, running day and night, removes all the bark on logs.

Back and forth shuttles the carriage to one of the two eight-foot band mills. The lumber then moves over to one of the two five-foot resaws, to the edgers, trimmers, and onto the green chain, where it goes by carrier belt to a platform, to be graded by a crew of markers. An inventory man takes down the footage, and standing

MECHANICAL EQUIP- ment like this Pettibone Cary-Lift (Model 54C), makes handling of logs easier and faster at the Brown Company's sawmills.

ready to pick off the special type of lumber to go into waiting wagons, is the crew of loaders.

THE SLABS AND EDGINGS travel along the bottom of the mill floor and dump outside, where they climb to the chipping machine. Approximately three freight cars of chips are cut every day for making of pulp.

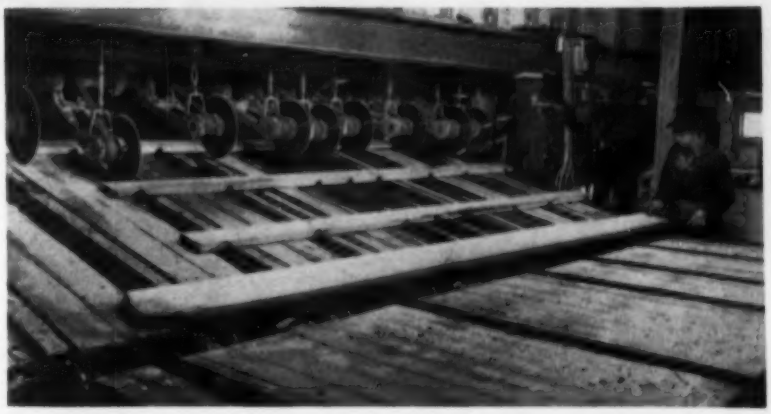
Brown Company was originally founded as a saw mill. Mr. W. W. Brown early foresaw the great future of the lumber business, and in 1868, purchased an interest in the partnership of H. Winslow and Company.

John Oswell, retired saw filer, now in his eighty-fifth year, recalls some of the early days.

"I commenced work in the old saw mill when I was twelve years old", he declared. "That was back in 1883. There were three band saws and two gang saws. We boys got $15.00 a month for pulling up slabs during the summers."

In 1888, Mr. W. W. Brown's son, H. J. Brown, became superintendent of the saw mill and resided in Berlin. This same year, a kyanizing plant for preserving spruce lumber was built.

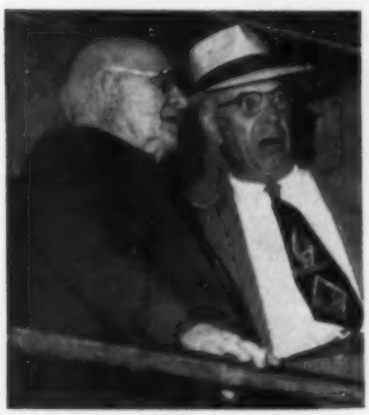
In 1890, the daily production of the saw mill was 150,000 board feet, or six times that produced at the beginning. The mill also turned out by the thousands of feet laths, shingles, pickets and dropboards.



EDWIN THRESHER is shown at Prescott air-controlled trimmer in Brown Co.'s hardwood sawmill.

On July 11, 1897, in a matter of only a few hours, the first saw mill burned down. A temporary mill was quickly erected and used for a year until the second mill was built. In 1913, fire again destroyed the sawmill. But that didn't stop Brown Company. For the second time, the mill was rebuilt.

Changes in the business world led Brown Company to shut down its sawmill in 1930. But in 1952, the saws were again humming. A mill was built to be operated by the Heywood-Wakefield Company of Gardner, Mass. The mill—the present hardwood plant—has been operated by Brown Company since 1954.



JOHN OSWELL, left, with company for 65 yrs. as sawmill man and saw filer, talks with Clausson Soule, mgr., Brown Co.'s sawmills, who has been in field for half-century.

TWO FIVE-FOOT resaws help speed production in Brown Co.'s hardwood sawmill. Resaws are 10-in. wide and 30 ft. long. Bill Mullins is operator.

ASSEMBLING OF end-matched random-length 3-in. cut-up stock (glue already applied to edge and end) to form 4x16.5 foot panel on double lay-up table.

Edge and End-Gluing Process Produces Furniture Panels

Wolverine Western Lumber in Ore. utilizes lower-grade pine to fabricate paneling.

E. W. BERGSTROM, manager, examines finished panel on shipping deck.

SHORT PONDEROSA PINE stock is converted into 4x16 ft. panels by simultaneously end-jointing and edge-gluing random length three-inch or four-inch stock from which the defects have been removed by trimming, at Wolverine Western Lumber Co., Burns, Ore.

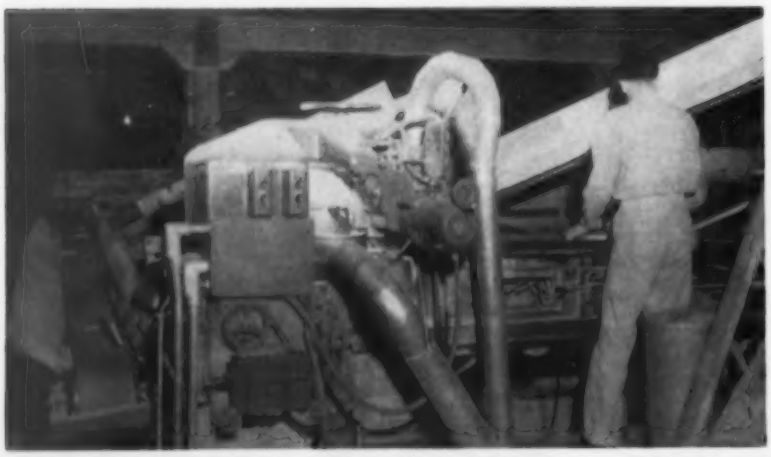
The glue-up department operates in conjunction with the company's sawmill and planing mill. Output of panel stock runs around 13M board feet per day on a one-shift basis, requiring for raw material about 25M feet of planer trims and lowgrade shorts — principally No. 5 common and "knot hole No. 4". Defects trimmed from stock have been marketed locally as domestic fuel.

Panels are produced in three grades —clear, No. 2 and No. 3. They are sold either in full-size 48.5-in. by 16.5 ft. (⅞-in. thickness) or ripped to desired widths of 28-in. or less and surfaced to ¾ or 23/32-in. thicknesses. Mostly the paneling is sold in surfaced 24-in. widths. Most shipments go to the Lake States market area but some have been made as far away as Florida. Some panel stock goes to lumber yards but it's principally an industrial item used in furniture and cabinets.

Here's the sequence of operations:

- Short low-grade kiln-dryed surfaced 4/4 boards and trims, from the company sawmill and purchased from local mills, are re-dryed in small kiln; moisture content of 8-10% is attained.

- Stock is converted to either three or four-inch width with a circular rip saw. Narrow material is transported to



STETSON-ROSS end matcher No. 2 puts fingerjoint pattern in other end of each piece of stock.

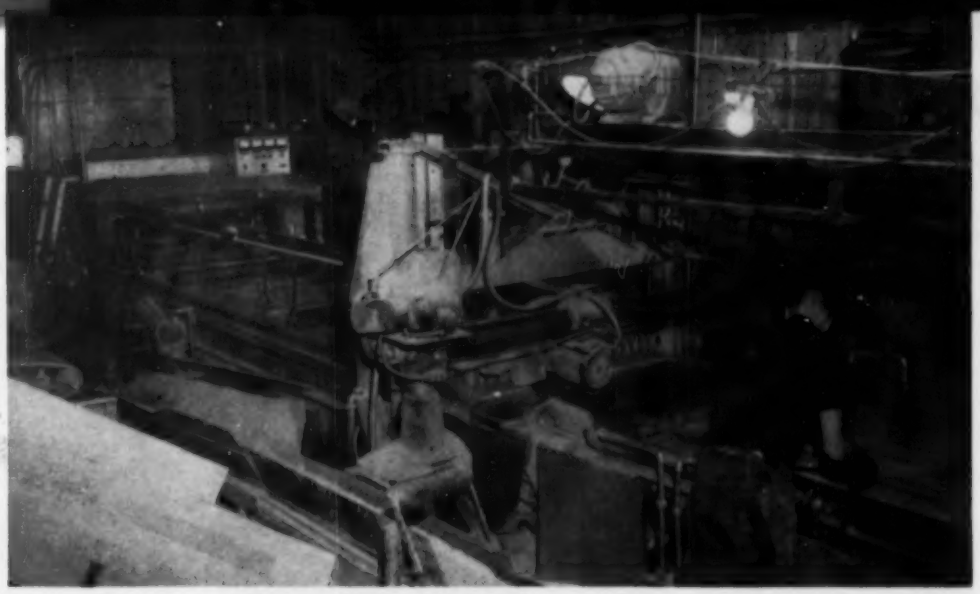
Company Personnel

PRESIDENT: *L. J. Laird, headquarters office at Battle creek, Mich.*

MANAGER: *E. W. Bergstrom.*

FOREMAN: *William Hamilton.*

CLARENCE MARTINDALE, *sawmill superintendent, directed much of the extensive mechanical work carried out in developing glue-up department facilities.*



OPERATOR in foreground lays up next panel as Comet traveling saw trims trailing end of previous panel just prior to entering electronic press shown at left rear in photo.

cut-up section of glue plant by Ross lift truck. Fifty-foot bridge crane handles packaged stock throughout front portion of cutup section.

• Two rapid speed cut-off saws, both automatic and foot operated, cut out defects, transported by belt conveyor to await fuel truck.

• Random length accepts go to a reversible belt transfer, are delivered to storage or to first of two end matchers. First end matcher cuts finger-joint pattern in one end. Stock is belt transported to second S-R end matcher for placing of complementary pattern on other end. Processed cut-up stock goes by belt to a grading table, is segregated and stacked on dollies ready for gluing.

• First glue-assembly process: Borden's cold-setting glue (resin-catalyst) is applied to one end of end-matched stock. End-matched pieces are placed on end (vertically) in carrier which transports them over a glue applicator onto a belt transfer leading to second glue applicator, which spreads Monsanto resin-melamine adhesive on edges.

UNSET PANEL (4x16.5-ft.) enters electronic press unit for edge gluing (70-sec. cycle). Unit has **Reeve Electronics, Inc.** RF generator mounted on top of press built by Union Tool Co.

• Stock is then laid up, end and edge matched, to form 4x16.5 ft. panels. Lay-up table is divided into two sections. While finishing lay-up of one panel in second half, another is started in first compartment.

• Live rolls of double lay-up table advance laid-up panel forward. Lead end is trimmed with a traveling cut-off saw. Panel again moves forward on live rolls; other end is trimmed with same saw.

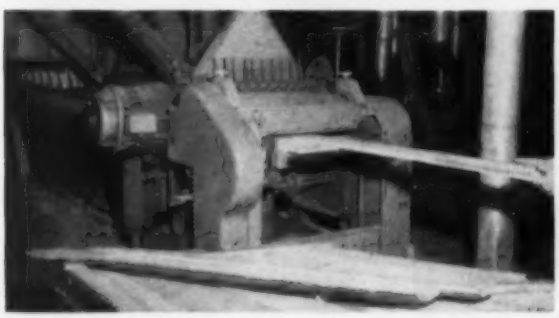
End-trimmed panel unit, consisting of around 140 components of four-inch wide cut-up stock or 180 of three-inch, is inserted into electronic press, undergoes automatically controlled 72-second radio frequency heating cycle for setting edge glue (Monsanto). Panel comprised of edge-unified components is ejected from press,

(*Continued on page* 127)

Principal Equipment

Moore dry kiln; **Mereen-Johnson** circular rip-saw; **Milwaukee Machinery Co.** 50 ft. bridge crane; **Irvington** cut-off saws (2); **Buss** 30-inch surfacer; **Comet** traveling cut-off saw.

Stetson-Ross end matchers (2), with **Cascade Saw Co.** cutterheads and knives; Borden resin-catalyst glue; **Monsanto** resin-melamine adhesive; electronic press with RF generating unit by **Reeve Electronics** and pressing unit by **Union Tool Co.**

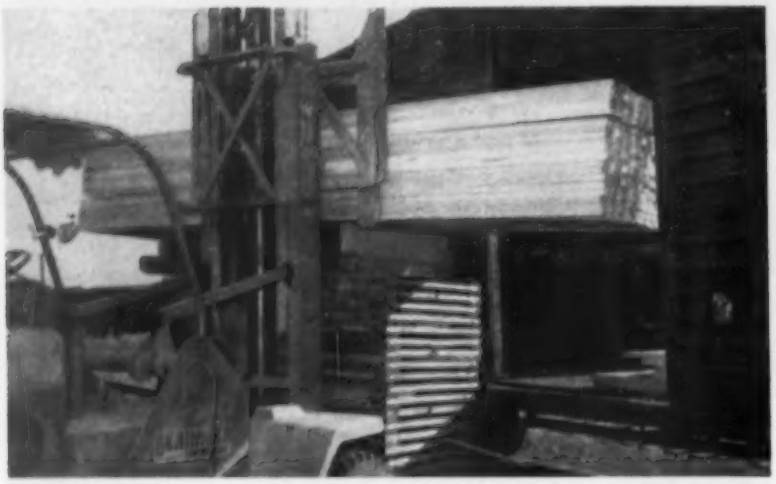


SURFACING SHORT salvage lumber for cut-up section with 30-in. Buss surfacer; also S2S finishes glued-up panels in widths to 28"

CONVERTING SHORT, kiln-dried, surfaced board to 3-inch width stock. Shown here in action is Mereen-Johnson circular rip saw.

Job Saving Ideas

Carloading Method Cuts Costs in Lumber Handling

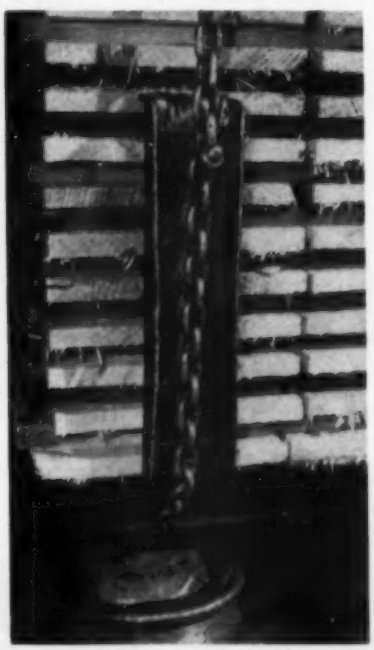


CARLOADING COSTS are cut with method developed by Arden Lumber Co., Colville, Wash. Stand shown in left photo can be moved with fork lift and placed at side of car. First lift load is placed directly on top of stand; as inside pile is built up, next fork lift load is placed on 4 x 4-in. short timbers to elevate it more. Man inside car (right) constructs his stack so that he can stand in most efficient position during loading of that half of car. Carloading is contracted to a single man, costs mill only 60c per M. This one man can load two cars a day, which takes care of the entire mill output. He has loaded up to as much as 57M bd. ft. per shift by himself. The loading stand is made of 2 x 6's nailed together with horizontal crosspieces sandwiched in for stability.

Carrier Drivers Control Hoists from Seats

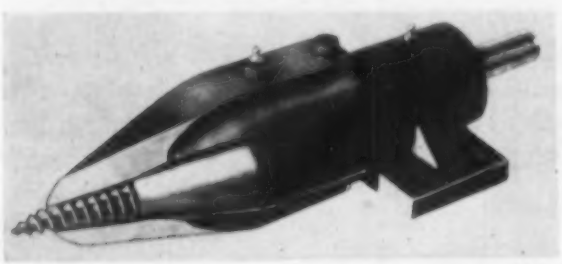
STRADDLE CARRIER driver controls movement of chains leading to tilting breakdown hoist at Aloha Lbr. Co., Aloha, Wash. Three control buttons are easily reachable from driver's seat. He can raise and lower chains to accept or discharge loads from carrier and move chains forward.

Metal Guard Saves Lumber



STEEL GUARD developed by Winton Lbr. Co., Martell, Calif. saves splitting and breaking of lumber when kiln charges are loaded and unloaded by power winch and cable. Guard is made from 4 in. channel iron, is 24 in. long, is bent at 90° angle 2" from each end. Channel sides are removed from both ends. Guard is hooked on end of load, so lower angle is under bottom lumber course, positioned where best support is expected. Cable is placed in channel to follow down and under the load.

Norwegian Fuelwood Splitter Saves Cutting Time



IN NORWAY, a new type fuel wood splitter has been developed, available in several assemblies. Simplest is pictured in U.S. Forest Service photo shown, the operating head alone. It has replaceable screw point, with splitting wedges above and below the steeply tapered screw. Screw starts easily in bark or wood, draws piece ahead. The steep screw taper, with splitting knives, develops splitting force. It will split hardwoods up to 14-in. diameter; less for softwoods. Splitter usually is motor driven, is available in portable stand units.

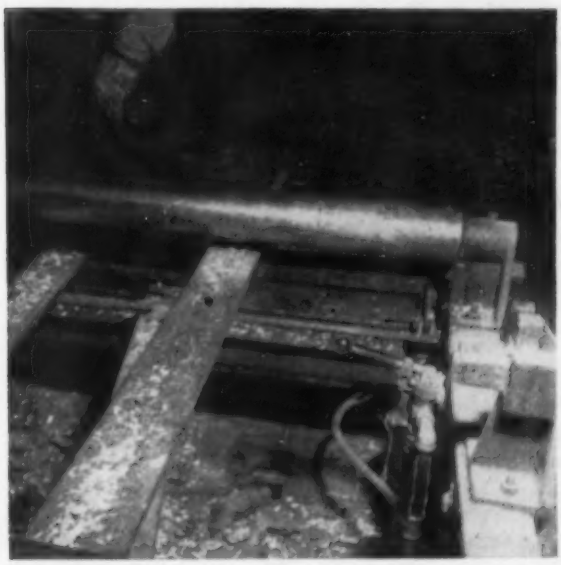
Job Saving Ideas

"Sinker Picker" Recovers Logs

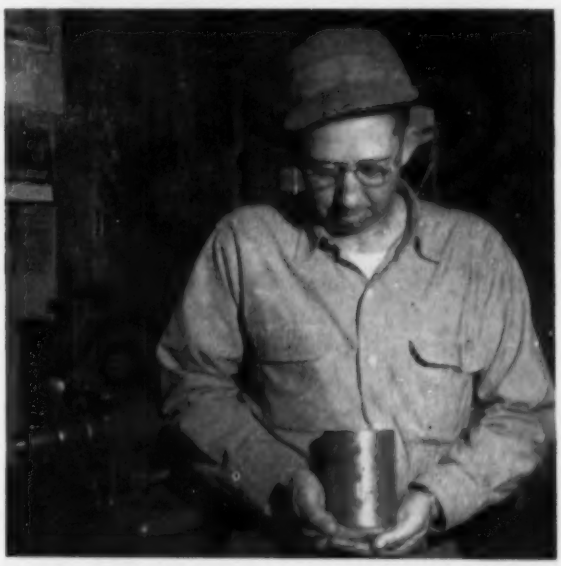
"Strap Rewinder" For Used Straps

TWO IDEAS used by McCloud River Lbr. Co., McCloud, Calif. in strapping logs for pond storage. At left is a "Sinker Picker". Unit consists of an A-frame hoist, using a single drum powered by a Chevrolet automobile engine, mounted on a float. Sinkers can be readily raised to the surface so they can be hooked onto one of the boats and towed directly to the mill. Except when required elsewhere on the pond, the sinker picker remains near the log dump ready for use at that point. At right, question of "what to do with used straps"? was answered by building a "strap rewinder", made in the company shop. Straps removed from stored logs now are wound into flat coils and secured with wire. Rewinder consists of crank-equipped shaft on which is segmented drum (about same width as strap) backed up by flange which serves as guide to keep back edge of steel strap in vertical plane as it winds on drum. Rewound strapping, which was formerly sold for junk, is now re-used for bundling storage logs as they arrive by truck-trailer.

Compressed Air Lubricates Edger Arbor



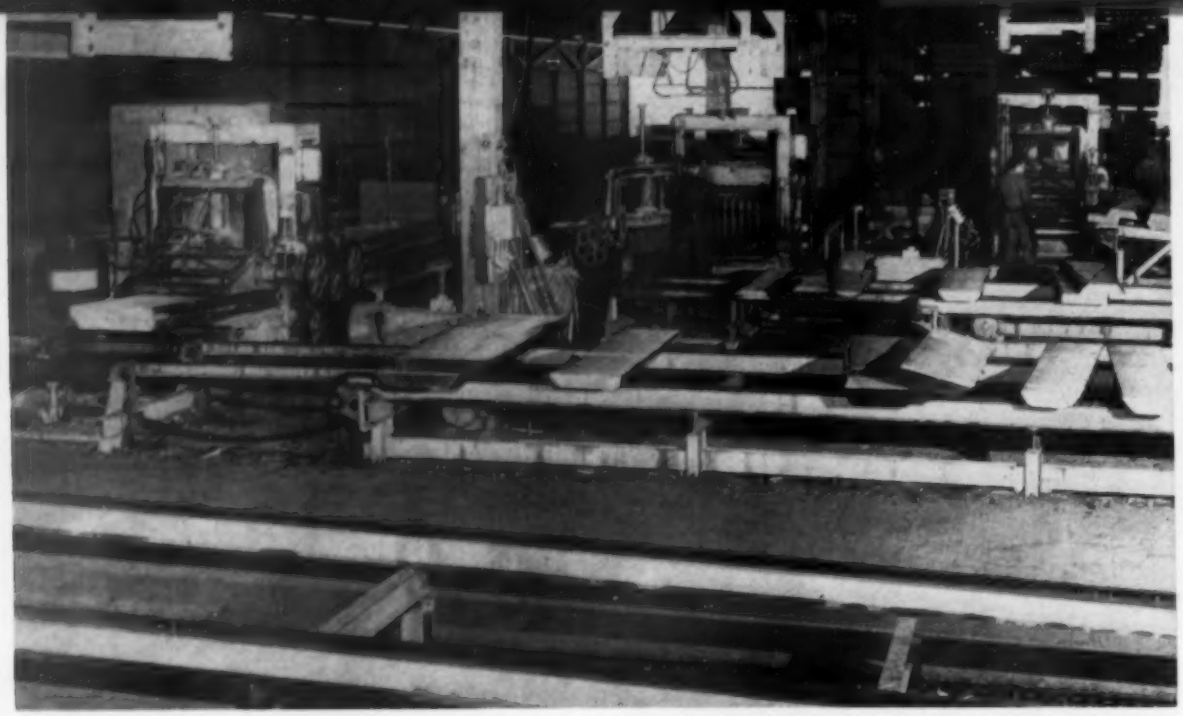
Bronze Bushings Prolong Burner Life



LUBRICATING EDGER Valvair valve (right), when activated by edgerman (upper left), dispatches compressed air through line to small oil tank in basement of Ralph L. Smith Lbr. Co.'s Castella, Calif. division sawmill. Pressurized air entering this one quart tank forces contained oil through outfeed line to emerge via terminal nozzles as spray applied to edger arbor. Oil feeds to application tank by gravity from prime supply. Check valves in infeed and outfeed lines of small tank allow oil flow to nozzles only when under adequate pressure and prevent back-flow to source.

SAWMILL SUPERINTENDENT Ernie Swift, Castella, Calif. division of Ralph L. Smith Lumber Co., holds bronze bushing he prepared for use as bearing on shaft at burner end of refuse conveyor by inserting carbon plugs in 120 degree section of member. He reports that such bushings, which were installed on the shaft so the pull bears against the plugged portion, have been operating inside burner for two years on a continuous one-shift schedule.

Send in YOUR ideas to THE LUMBERMAN!



THREE 36 INCH Wehrhahn cant gangs converting flitches into studs. Middle unit, with saws set for 4-in. cuts, processes all mill's 2-in. flitches and some 4-in.; other 2 receive only 4-in. Conveyor belts (on outfeed side of left and middle gangs) deliver studs to chain transfer leading to smooth-end trimmer. Transfer, foreground, takes overwidth flitches to one-saw edger, not shown.

Stud Mill Lines Up Three Gangs to Boost Production

Elk Lumber Co. at Medford, Oregon operates "unorthodox" 2x4 mill which stresses high recovery and precision made product.

ENCLOSED WASHER cleans surface of logs entering Elk Lumber Co.'s stud mill via log haul equipped with Esco chain and chairs.

IN A TIMBER STRUCTURES truss-constructed building 160-ft. wide by 440-ft. long, Elk Lumber Co., Medford, Ore., is turning out, on a one shift basis (from pond to car) about 120,000 board feet of studs daily, with 30-35 employees.

A log haul transports logs from a new 18-acre pond which supplements a four-acre pond tributary to the firm's conventional sawmill. It serves as log storage area and sorting pond for both mills, and as mill pond for the stud mill.

Mill features include:

- Rolls are provided for returning logs from mill deck to pond. A log with one portion most suitable for conversion into studs and the remainder for conversion into boards, goes first into the stud mill. The "stud" portion is

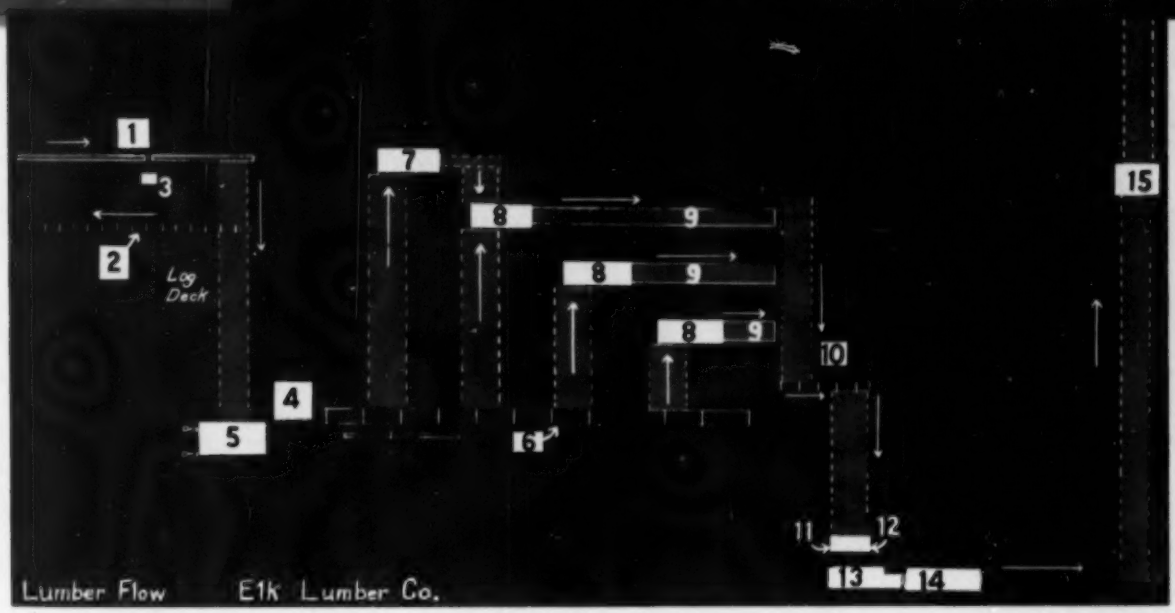
What Is the Ideal Stud Mill? . . .

Elk Lumber Company at Medford, Oregon is placing its bets on studs—or 2 x 4's—as the lumber item least likely to be affected by the growing tide of "substitutions".

Last July the management, headed by vice-president and general manager George C. Flanagan, placed in operation an unorthodox stud mill (see accompanying flow chart) which was designed to:

- **turn out top quality studs on a production line basis with the minimum accumulation of milling residues.**
- **manufacture a precision product, finished and packaged for maximum merchantability.**

What they did and how they did it is explained in this article.



Principal Equipment

(Numbers refer to flow chart)

No. 1, log haul and washer—**ESCO** chain and chairs; No. 2, log return rolls—**Sumner**; No. 3, deck saw, chain type—**Kliever** (Machine Shop, Medford); No. 4, headrig, 8-ft. long-column band—**Sumner**; No. 5, carriage (with steam shotgun feed)—frame by **Klamath Machine & Locomotive**, superstructure (with air setworks) by **Klamath Machinery Co.**

No. 6, live rolls—**Klamath Machinery**; No. 7, edger (6x72-in. using one saw)—**Klamath Machine & Locomotive**; No. 8, sash gangs (three with 36-in. openings, middle unit with saws for 4-in. cuts, saws in other two spaces for 2-in. dimension)—**Wehrhahn**, Delmenhorst, West Germany; No. 9, belt conveyors—purchased from **Moty & VanDyke**; No. 10, transfer chain—**Chain Belt**.

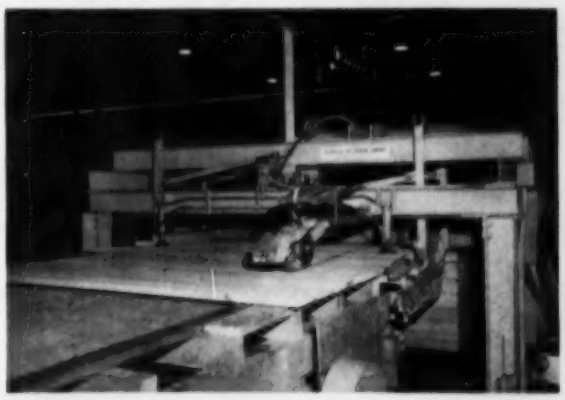
No. 11, end-surfacer and printer—**Irvington**; No. 12, paint applicator (spray)—**Binks**; No. 13, feed table—**Stetson-Ross**; No. 14, planer—**Stetson-Ross 202F**; No. 15, automatic stud stacker—**I. W. Johnson Engineering**.

Other equipment: Chipper—**Sumner** 66-in.; motors—primarily **General Electric**; building trusses—**Timber Structures**; steel strapping—**Signode**; lift trucks—two **Hysters**, one **Gerlinger**; end paint—**Redda**; knife grinder—**Hanchett**; saw sharpeners—**Armstrong**.

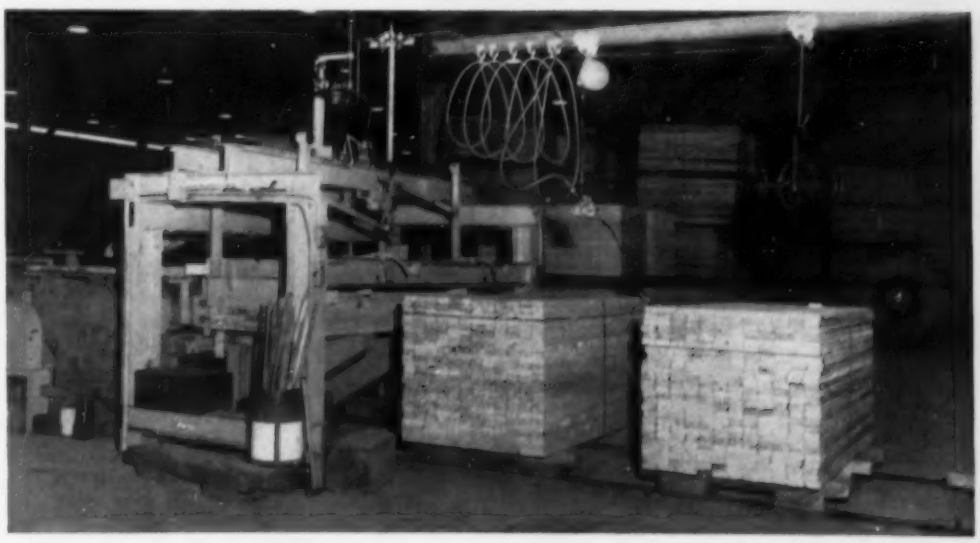
bucked off on the mill deck; the remainder is returned to the pond via the return rolls for processing in the main sawmill.

• Sawing floor of the mill is practically at ground level; processing machinery is mounted on foundations in a concrete basement.

• Every log going through the mill is converted into flitches at the headrig. Two or three passes are normally taken on each of two opposite sides via two-inch cuts (6/32-in. kerf and 1 26/32-in. stock) and the remainder reduced to 3 26/32-in. flitches. These feed to



WHEEL MECHANISM, shown in photo, grade stamps studs as they move into I. W. Johnson automatic stacker a tier at a time.



STACKER, built to Elk specifications by I. W. Johnson Engineering Co., automatically packages studs in standardized units, deposits same on floor chains which remove package from stacker while bringing another set of blocks into loading position.

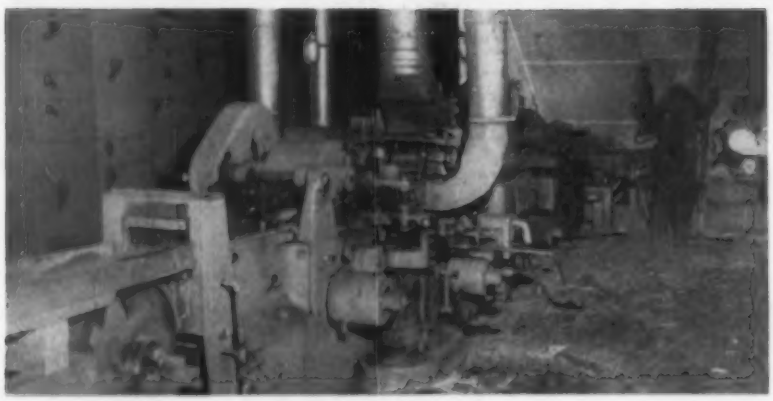
SINGLE-SAW 6 x 72 inch edger, which was built by Klamath Machine & Locomotive Works, breaks the wide flitches down so that they can go through the 36-inch sash gang, visible in background.

the three sash gangs to be sawed into 2x4's. Two gangs have saws spaced 1 26/32-in. apart (center to center) and one with saws 3 28/32-in. apart.

Accuracy and smoothness of cut achieved by saws in this mill, according to Mr. Flanagan, makes these close cutting tolerances both possible and practical. The resultant "rough" 2x4's measure 1 22/32 by 3 24/32-in., including allowance of 1/32-in. for finish surfacing on faces and 1/16-in. on edges.

• Thin saws are used, which reportedly "save 7/32-in. every cut". The band headsaw produces a 6/32-in. kerf, as compared to 13/32-in. for a double-circular headrig; the gang saws a 4/32-in. kerf instead of the 11/32-in. kerf of a circular gang edger.

SHARPENING chipper knives with Hanchett hydraulic grinder.



SPECIAL-BUILT 202F Stetson-Ross two-way thicknessing planer surfaces the studs to accurate size from the stock which is sawed with 1/32-inch allowance per face and 1/16-inch per edge.

Key Personnel

Key personnel concerned in designing, building and operating Elk Lumber Co. stud mill:

George C. Flanagan, Vice President-General Manager.

Herbert C. Sampert, Plant Manager.

Elbert McNew, Stud Mill Superintendent (who also served as Construction Supt.)

Ralph Marlatt, Purchasing Agent.

Robert Vincent, Engineer (who did the detail engineering).

• Even though all two-inch flitches from the headrig go to the one gang which has saws set for cutting 2x4's the "wide" way, this gang does not operate exclusively on the thinner stock. When it runs short of the lighter flitches, it receives four-inch material just as do the other two. The resultant production in such case, though, is in 4x4s (rather than 2x4s) marketed as porch posts.

• Edger is equipped with a single fixed-postion saw. It reduces large flitches to small enough size that they will go through the 36-in. opening of No. 1 gang in conjunction with which the edger operates.

• Gang-sawn studs, belt delivered from gangs to chain transfer, feed through an automatic End-Surfacer which first smooth-trims both ends to precise 96-in. length.

• Immediately following trimming, a newly developed alcohol-base (Rodda) paint, with rapid drying and penetrating characteristics, sprays onto the freshly cut end surfaces. Just prior to leaving the End-Surfacer — through which THE LUMBERMAN clocked 34 studs every 30 seconds—an end printer automatically recessed imprints "ELK 96" in red ink.

• From this end-surfacing unit, studs

Planer Features

A General Electric amplidyne drive powering the planer and feedtable has production capacity of 800 lfpm. and enables the operator to quickly synchronize speed of the surfacing unit with that of the trimmer.

The top and bottom cylinders, each containing 12 knives, are 13-in. long. After running a set of knives for a number of hours, the operator laterally shifts the cylinders to bring an unused portion of the knives to bear on the four-inch face. In that these cylinders are long enough for three such positionings, a set of knives runs for many shifts before replacing it with a sharp set. The two side heads are each equipped with 10 milled-to-pattern eased-edge knives which simultaneously surface and bull-noze edges and corners of the studs.

IRVINGTON END-surfacer smooth trims, paints, prints ends at rate of about 70 studs per min.

enter the feed table of a model 202-F planer, specially built by Stetson-Ross as the first unit of this model. Its two-way thicknessing principle (it processes to fixed dimensions—1 21/36 at bottom and then 1⅝ at top head—rather than taking cuts of fixed thickness at bottom head) complements the precision sawing to achieve high utilization. The combination of these two processing factors facilitates production of finished on-size 2x4s from rough stock cut with but 1/32-in. allowance for surface removal on top and bottom planer heads.

• Stock discharging from the planer passes through a compartment with two nozzles (one at bottom of left side, other at top of right side) which spray anti-stain solution (Monsanto's Santobriate) to entire edge and face surface of studs passing through. Except for curtained infeed and outfeed ports, application chamber is completely enclosed. Surplus solution drains to bottom of enclosure and passes through a screen enroute to a settling basin in the basement for reuse. The system's pumping unit and mixing-storage facilities also set in the basement.

Studs emerge from the spray chamber onto a conveyor belt which deposits them on a chain transfer at back end of mill structure about 200 ft. from the planer. There the stock is graded and the lower grade pieces pulled and piled.

• Structural grade stock is transported directly to a unique automatic stacker specially built for Elk by I. W. Johnson Engineering Co. (Tacoma) Besides automatically forming studs into neat uniform tiers and incorporating same into a package one layer on top of another, the finished package units are automatically placed on floor chains for removal while, at the same time, bringing another set of carrier blocks into loading position in the stacker.

Studs approaching the stacker come together into a continuous edge-to-edge formation to be taken into the unit a tier at a time. As the stock moves forward into the stacker it passes under a wheel which rides on the studs beneath. An inking unit and a series of rubber stamps on the wheel's rim print "Certified Structural Grade Studding" on the face of each piece.

Completed packages, containing 25 tiers of 12 studs each, are bound with steel Signode strapping while still on the floor chains. As needed for loading into rail cars at a siding adjacent to the mill, a lift truck takes the packages from the floor chains to the loading platform where another fork lift inserts them into box cars to a small (Hyster 40) lift truck which does the final loading. Most loads contain 20 packages.

FINISHED STUDS are end-coated with fast drying Rodda paint and end-printed.

How Residues Are Handled

Elk Lumber makes use of an unusual system for handling wood and bark residues produced in the stud mill. Although currently treated and used as hog fuel, the solid material is actually converted into chips by a 66-in. (Sumner) chipper. The chipper discharges onto a below-ground conveyor belt, to which sawdust and shavings are also added, for underground transport 700 ft. to a fuel bunker alongside the company's power plant. This chipper was installed in place of a hog because of future plans for making marketable pulp chips from the mill's solid by-product wood, after a log barker has been installed.

Washington State Plans Junior Logging Congress

• The number of high school students attending the Washington State Junior Logging Congress this spring is being cut by 20 per cent. The reasons are (1) to make the attendance more selective and more of a privilege and (2) to provide greater individual attention.

The Washington congress is scheduled for May 8-10 at Pack Forest near LaGrande, Wash. Lumber and logging companies who are interested in sending a boy from their communities should contact Junior Logging Congress, Anderson Hall, University of Washington, Seattle 5. The cost for seven meals and two nights is $7.50.

Program this year consists of forestry, logging and mill tours as well as lectures and discussions on choice of forest industries as a career field.

California Redwood Association Elects Officers

OFFICERS OF California Redwood Association for 1957 are, (L to R): Philip T. Farnsworth, executive vice pres.; Hugh J. Jacks, The Pacific Coast Company, president; W. M. Moores, Hollow Tree Lumber Company, new member of Board of Directors; and Selwyn J. Sharp, secy.-treasurer.

MODEL 186 RESAW setworks positioner installed at Pacific Pine, Ltd. in British Columbia by Controls and Communications uses electro-hydraulic controls. The push-button console at right automatically controls 10 commonly used dimension settings. "Forward" and "reverse" controls provide other dimensions, which are visually indicated on the large dial (by arrow) in picture.

Remote Controls Automate Mill's Resaw Setworks

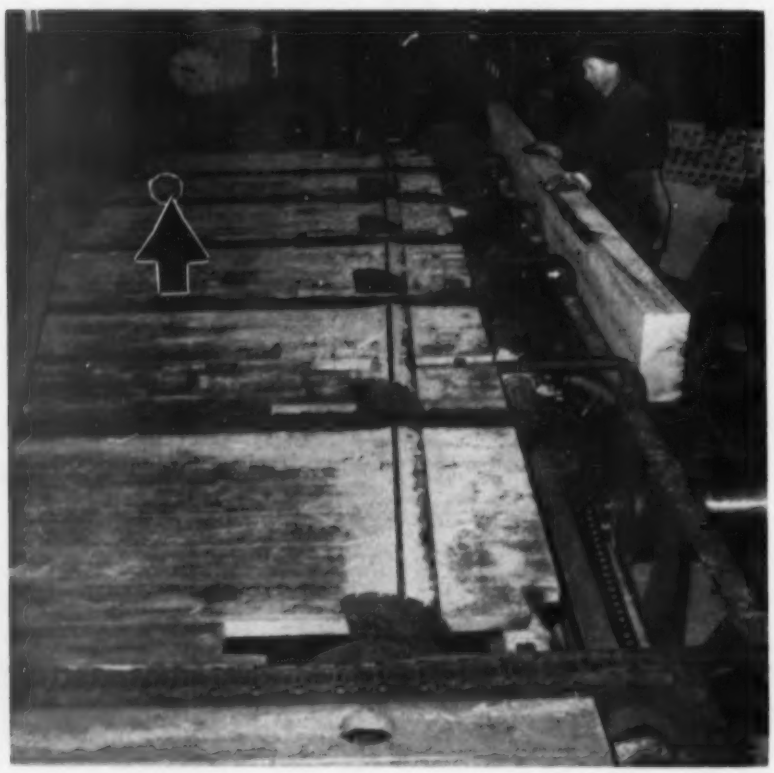
Pacific Pine Ltd. in British Columbia installs electro-hydraulic console controls

QUICK AND ACCURATE SETTING of a vertical resaw through a console-controlled electro-hydraulic operated setworks positioner has been obtained by Pacific Pine Co., Ltd., New Westminster, B. C., according to president Paul Heller.

The setworks positioner, installed by Controls and Communications Co., Eugene, Ore., on a seven foot Sumner vertical resaw, enables the sawyer to pre-set dimensions of cut remotely, with push buttons which control the set-rolls or the line bar. He does this simply by pressing a button corresponding to the dimension of cuts desired.

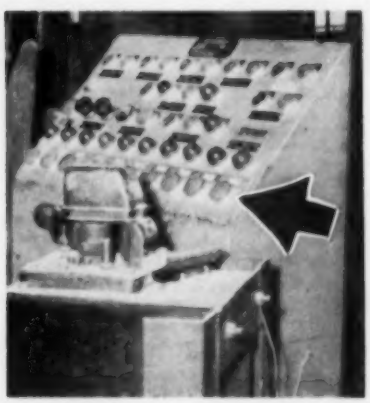
The operator's control console contains ten pushbuttons marked with the most commonly used dimensions of cut. Momentarily pressing any of the pushbuttons will automatically move the resaw setworks to the correct position for that dimension of cut. In addition, a "forward" and "reverse" button are provided which, together with a large dial indicator geared to the setworks, permits the operator to move the setworks to any dimension not available on the present buttons. The dial is calibrated so that two revolutions of the pointer equal 10 inches of movement on the setworks. It can be read down to 1/32".

When a dimension button is pressed, the sense of the selected dimension is compared with the position of the set-



RESAW FEED TABLE has a W. H. Rambo designed board separator, shown in "up" position above. Six cams lift single boards from incoming side of table, line them up in front of feed man, at right. Arrow points to hole thru which photo-electric cell control actuates incline feed, left.

PHOTO ELECTRIC cell on rafter above resaw feed table provides full automatic control to feed boards from incline transfer to table.



BOTTOM ROW of buttons gives automatic setting control for 10 commonly used dimensions. Other buttons centralize the sawyer controls.

works in an electronic position control. This control then energizes the hydraulic system to effect movement of the setworks in the correct direction to arrive at the desired dimension. When the desired dimension is attained, the hydraulic system is stopped and the setworks remain in the selected position until another dimension button is pressed by the operator.

IN ORDER TO ATTAIN high operating speed, and at the same time permit accurate setting to any dimension not preset, two operating speeds are used. Automatic set is accomplished at high speed, while the manual set is made at a speed low enough to permit accurate stopping at the desired dimension.

Specifications of the unit are:

• Setting speed: automatic, three inches per second; manual, adjustable to about one inch per second, so operator can observe dial motion and stop setworks at right place.

• Number of preset stops: Standard, 10 (any number can be provided on special order).

• Accuracy of set: Better than 1/32".

The basic system of this electro-hydraulic positioning control can be used, not only on resaws, but also on edgers and riderless carriages. Both the setting speed and the accuracy of set can be increased through the use of hi-speed hydraulic valves, and modified electronic controls. In the case of edger setworks, the saws can be moved continuously by setting coursers on a rulerbar, rather than having individual pushbutton sets.

The bottom row of buttons on the console control panel sets the setworks for the most commonly used dimensions of cut. The balance of the buttons provide centralized controls for all other sawing functions. A Vickers hydraulic unit actuates a Hannafin hydraulic cylinder which moves the setworks.

OTHER AUTOMATION FEATURES on this resaw installation include a W. H. Rambo designed board separator and a photo-electric cell controlling the incline chain feed to the resaw feed table.

The foot controlled powered separator is a series of six cams on a common shaft operating from underneath the feed table through slots. A ridged lift on each cam raises boards individually from the incoming side of the table, lines up each board and places it in front of the feed man on the resaw as the cam completes its rotation.

The photo-electric cell starts and stops the camel back chain feed to the resaw feed table. The control beam passes through a hole in the feed table, between a cell positioned on a ceiling member and a light underneath the feed table. When the feed table is loaded with lumber, the beam is interrupted and the incline feed is stopped. When the last board on the feed table clears the hole in the table, the beam is energized, closes the circuit and starts the incline feed spilling more lumber onto the resaw feed table. This automatic system prevents bunching up of lumber on both the incline feed and on the resaw feed.

Vehicle Maintenance Conference Scheduled

• EVERY COMPANY which operates its own trucks or truck shop is invited to send representatives to the Sixth Annual Vehicle Maintenance Conference to be held March 25-27 at the University of Washington, Seattle.

The conference covers the entire field of automotive maintenance and repair and is of special value to master mechanics and shop personnel, logging foremen and superintendents. The meeting is conducted in a series of panels, each one devoted to a certain size class of trucks, as follows: light duty, medium duty, heavy duty, on-highway heavy duty and off-highway logging and industrial.

The "faculty" is drawn from factory service managers and engineers from the truck and equipment manufacturers and suppliers and from top shop superintendents and master mechanics. While truck operators from all industries are invited, the logging field has in the past been well represented by many companies in Oregon, Washington, Idaho, Montana and British Columbia.

This is a "nuts and bolts" meeting in that there are no formal speeches. Information is exchanged through panels and informal discussions.

Any individuals or companies interested in further details and registration should contact Prof. Fred H. Rhodes, Jr., Conference Chairman, Civil Engineering Dept., University of Washington, Seattle 5, Wash. Cost for the three day meeting including seven meals on the campus is $23.00 Hotel accommodations are handled by the persons attending.

Filer Converts Edger Saws Into Splitting Units

• Don Selberg, planing mill filer at McCloud River Lumber Co., McCloud, Calif., converts 12-gauge, nine inch diameter edger saws into specialty splittnig units operating on bottom profile of a moulder. He uses this sort of saw for processing stock to fill special orders calling for ripping surfaced boards of four, six, eight or 10-in. widths into two finished boards—either "center ripped" or of two different widths.

With Mr. Selberg's saw, ripping removes but ⅛-in. kerf from the original thickness and results in two boards with newly formed edges which appear to be fully as smooth as the faces and edges finished by conventional planer surfacing.

His light-gauge saws have 28 smooth-cutting (McKam type) teeth to which is applied a Bodenheim set. In setting, he springs each of the 7/16-in. long teeth approximately 1/64-in. throughout nearly its entire length. After setting, each tooth is slightly jointed.

In the planing mill this sort of saw is used on bottom profile of a Yates-American C55 12-in. moulder just for ripping the high-grade finished boards to order. Use advantages are smooth edges on the ripped stock and minimum saw kerf. Because of these two associated factors the resultant boards are wider than would normally be obtained and, because of this, they better fill the needs of the particular customer concerned.

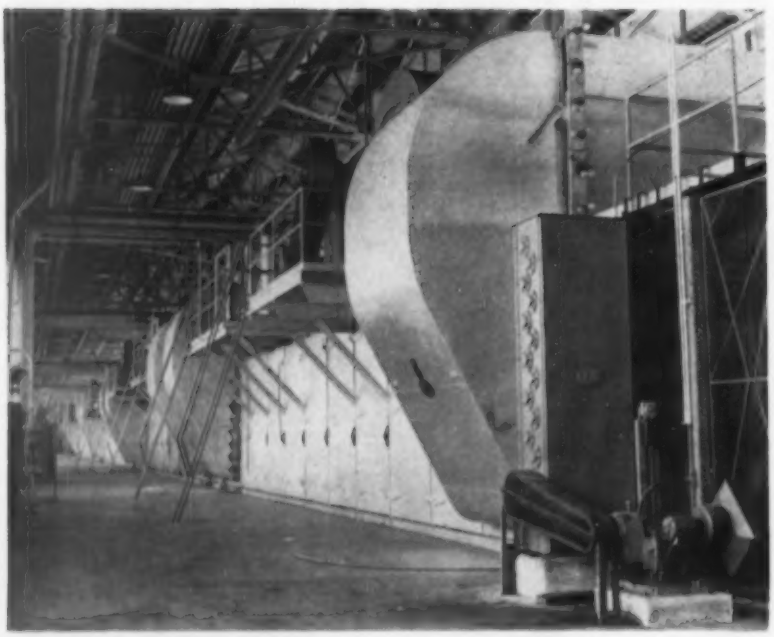
The same type of set is used for cut-off and cleat saws in the company's box factory as a means of obtaining smoother surfaces and minimum kerf.

PLANING MILL filer Don Selberg, McCloud River Lbr. Co., jointing teeth of special Bodenheim set splitting saw which he made. It's used on the bottom profile of 12-inch moulder for ripping the surfaced boards to order.

NATIONAL GYPSUM CO.'S new fiber-insulation board plant, foreground, Mobile, Ala., is in full production. Combined with old plant, background, operation will be one of the largest of the company's 39 plants. New plant has approximately 150,000 sq. ft. of floor space.

Insulation Board Plant Employs New Process

National Gypsum Co. plant at Mobile, Alabama adds to existing facilities and doubles capacity



AS CUT SHEETS of board emerge from the press section, they enter big decks of Coe dryer, consisting of four drying zones. Each zone consumes a maximum of 25,000 cu. ft. of gas per hour.

DOUBLING CAPACITY, National Gypsum Co. has put into full production a new multi-million dollar addition to its insulation board plant in Mobile, Ala.

The new addition adds approximately 150,000 square feet of floor space to the combined operation which will consume approximately 100,000 cords of pulpwood annually. An entirely new process, developed by the company's research, engineering and production staffs, is being used in the expanded plant.

A 600-foot-long fabricating machine, new forming and drying equipment and asphalt and laminating production lines were installed. In addition, 50,000 square feet have been added to the plant's warehouse.

Melvin H. Baker, chairman of the board of National Gypsum, said "the output of the new plant has relieved the short supply of insulation board products." He estimated the expanded plant will produce enough of these materials for over 50,000 homes a year.

THE MOBILE PLANT is now one of the largest single operations in the company's chain of 39 plants. The original Mobile unit has operated

VAST PILES of Southern pine and hardwood logs lay waiting for use as basic raw material in highly precision manufacture of insulation board products at the Mobile operation. Two plants will consume combined total of approximately 100,000 cords of pulpwood per year.

close to capacity ever since it began production in 1938.

Products to be made in the new plant include asphalt impregnated sheathing, insulation roof board, roof slab and insulation backer board for asbestos and other type shingles.

The manufacture of insulation board at the new plant is a highly complex process. It requires expensive equipment and skilled pulp experts.

From the extensive forests of the South — extending out from Mobile more than 300 miles—come the pine and hardwood logs used in the manufacture of sheathing, shingle backer, roof deck and roof insulation.

PULPWOOD IS SHIPPED to the plant by rail, barge and truck in amounts not exceeding 30 days' consumption. Logs do not stay in the big storage pile very long because experience has proven that fresh, "lively" wood contributes to the overall strength of the finished insulation board products.

As needed, the logs are deposited on a conveyor by a special bucket-type crane and are sped along to a chipper house. There they are fed into a giant, 500 horsepower chipping machine—the Murray 84-inch diameter chipper—which uses 10 knives to convert the logs into small chips.

Chips are then fed into twin silos, and as needed move by conveyor into a big "cooker" with a capacity of 107 tons a day. National Gypsum reports that while this type of digester has been used in the South's paper industry for a number of years, this is the first time that such a machine has been operated in the manufacture of insulation board products.

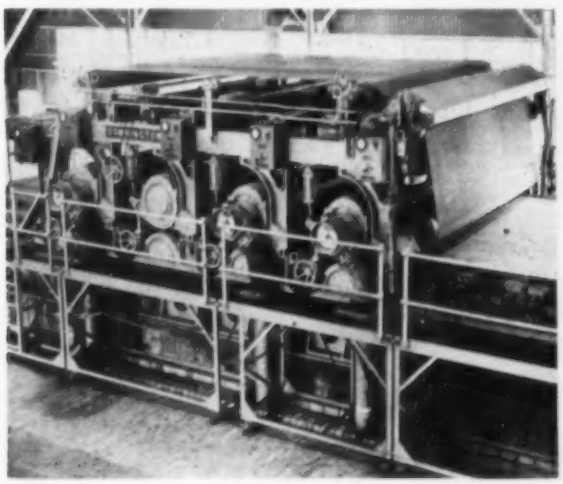
After the chips are digested in the continuous digester, they pass through a blow tank before entering a primary refiner.

In the primary refiner, the chips are converted into semi-refined pulp consisting of fibers that will be further processed in subsequent operations.

SEMI-REFINED PULP goes into a consistency regulator and next moves into a secondary refiner where the chips are brushed and are converted into a final acceptable pulp.

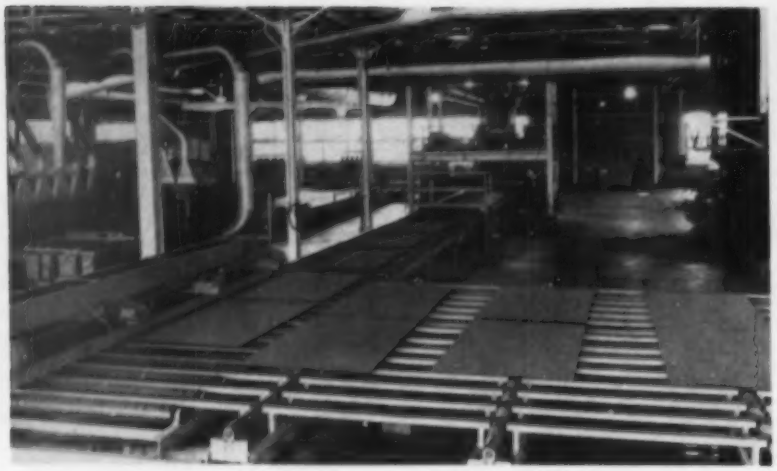
As the finished fibers move out of the secondary refiner, they are circulated in a level tank where the "consistency" of the wet pulp is further adjusted to insure proper machine formation. In the level tank, the fibers receive various additives to impart special characteristics that are necessary for the formation of the finished board.

From the level tank, the fibers advance into a head box where they are



UNCUT MAT receives wet trimming in Downington machine press section, with four suction press rolls, before entering the dryer.

MURRAY 84-inch diameter chipper utilizes 10 knives to convert the logs into acceptable size chips to be used in the digesting process.



AFTER THE BOARDS are cut to specified shipping width and their edges are trimmed in the fabricating department, they then pass along this transfer section shown in the above picture.

evenly dispersed for smooth passage over a forming machine.

The fibers then pass into a wire bed which moves them into the forming machine and press section, described as a Fourdrinier type of operation. At top capacity, this operation will produce about 500,000 square feet a day of half-finished products.

ACTUAL BOARD FORMATION begins ot take place as the fibers are routed from the head box into the Fourdrinier wire bed. By means of traveling wire belt and side belts, the pulp is evenly dispersed and is formed as a continuous mat containing about 80 per cent moisture.

Riding along the wire belt, the layer of pine or hardwood fibers pass under suction press rollers which squeeze out excess water.

Passing through the forming machine, the fibers emerge as continuous, uncut board. This "wet mat" then moves along the remainder of the Fourdrinier wire bed where it is sent into the press section. Moving through a trimming operation, the wet mat is cut into large sheets. This operation is performed by circular saws which can be adjusted to cut for any desired gross width and length. This is known as wet-end cutting.

As cut sheets of boards leave the trim section, they enter the big ovens of a Coe dryer consisting of four drying zones. Inside these zones, which each operate at different temperature levels, the endless movement of insulation board sheet is dried.

EACH ZONE CONSUMES a maximum of 25,000 cubic feet of gas an hour. From two to three hours are required for each board to pass through the four zones, depending on the type of board to be made and the oven load. The drying operation also includes machinery that controls the feeding and discharging of the sheets into and from each of eight tiers.

After passing through the dryer, the boards are fabricated into products of various size and specifications in the fabricating department. The boards are routed into the fabricating operation along a 100-foot roller conveyor which leads them into a cutter. Here the boards are cut to specified shipping width and their edges are trimmed for a smooth cut.

The boards then pass along a transfer section which feeds into three separate production lines. There the edges receive a final dimensional trimming.

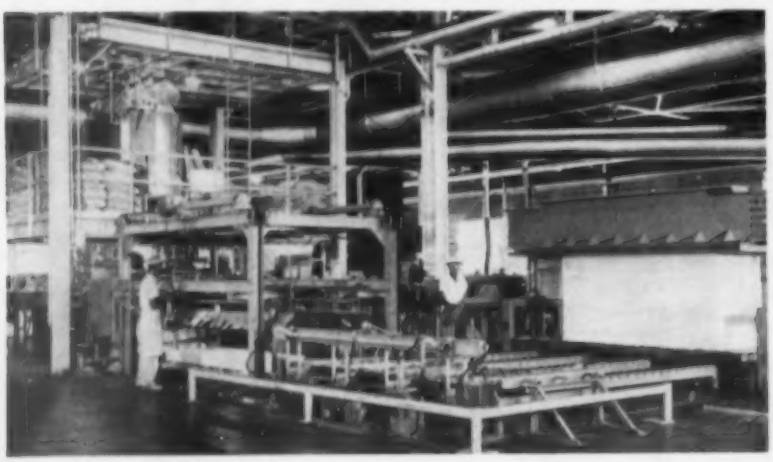
The board is transferred to either the laminating lines, or to the asphalt-coated or non-coated sheathing lines.

In the lamination process, boards are bonded together by an adhesive and the adhesive is "set" under pressure by press equipment.

ROOF DECK GOES through the lamination process while sheathing is wrapped. Shingle backer is cut on order and then wrapped. Roof insulation is coated with asphalt and then wrapped.

In the design of the new fabricating department, considerable stress was placed on mechanization of handling of all products. To perform this job, various equipment suppliers were called upon to work in conjunction with production and engineering in the final layout of the plant.

All conveyors, including transferring and feeding-to-production equipment, were designed and furnished by the Coe Manufacturing Co. The laminating and transferring equipment was furnished by American Manufacturing Co. and Black Bros. Co. The cutting equipment was furnished by Mereen-Johnson Co.



ONE OF THREE final production lines in fabricating department is the laminating machine where cut sheets of roof deck are bonded together by adhesive. Adhesive "sets" under pressure.

California Coreboard Plant Nears Completion

• A new $3,300,000 coreboard plant being erected by Roddiscraft, Inc., at Arcata, Calif., is nearing completion and should be ready for operation by early spring. The plant is a three-sotry concrete and steel building, which will be heated by a hot water system.

Plant manager Robert K. Molloy states that the process is unlike any other in the U. S. The product, made from leftover wood, will be used for special quality furniture, as core stock for plastic or hardwood veneer overlayment.

German machinery, being installed by German engineers, will be used. The plant will employ 55 men on a three-shift basis. The initial panel will be a light colored, medium density ¾-inch board. Panels before sawing will be four by 16 feet, will weigh 150 pounds.

Initially, 150 tons of Douglas fir residue wood will be required each 24 hours, purchased from outside sources. Veneer and plywood plant residues will be utilized at a later date. Planer shavings, sawdust, hogged fuel or chips will not be used. The process will be a dry one, requiring no great amount of water.

Hardboard, Particleboard & Flakeboard Department

Group Elects Officers

• New officers of the Western Particleboard Association were elected at a meeting held in January at Portland, Oregon.

President-elect is C. M. Starnes, manager Chipboard Products, Inc., Grants Pass, Oregon. Vice-president is K. L. Morrow, manager of the Shasta Plywood division, U. S. Plywood, Anderson, California.

The office of secretary-treasurer is being filled by Hobart McQuery of Willamette Fibre and Chipboard Co., Sweethome, Oregon.

Directors include Joe Clark of Brownsville Particleboard & Associate Products, Inc., Brownsville, Oregon; and Dale Schubert, representing Columbia Hardboard Co., Everett, Washington.

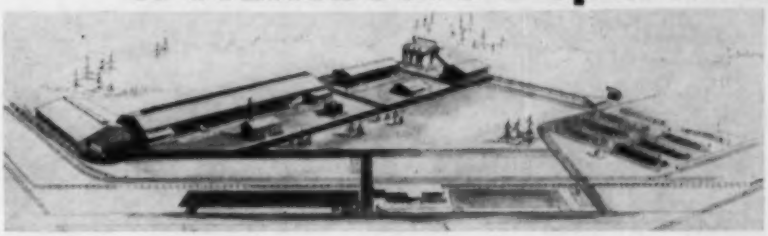
The Western Particleboard Association is concerned with trade promotion and particleboard standards.

Board Plant in Turkey

• A new hardboard plant now being installed abroad and using basic American equipment is expected to be in operation within 6 months. The plant was engineered by Industrial Development Company, headed by Dale L. Schubert.

The 50-ton plant, known as the Elka Company, will be operated in Istanbul, Turkey. Robert Riley, project engineer, with Industrial Development, will supervise installation of equipment, including a Williams White press, Oilgear pumping unit, charging equipment by American Manufacturing, as well as many other special board machines.

The plant will use local softwood and hardwoods as raw material.



New Flakeboard Plant Scheduled

A MULTI-MILLION DOLLAR FLAKEBOARD plant soon will be built in Farmville, Pitt County, North Carolina, by the American Cyanamid Company (the parent organization) and its subsidiary, the Formica Corporation, which was acquired last April. Plant completion is scheduled for the first half of 1958. Trade name of the product will be Formica Flakeboard.

The plant is being engineered by Industrial Development Company, Tacoma, Wash., headed by Dale Schubert. His staff will supervise plant construction and the purchase of machinery and supplies.

Kenneth C. Towe, president of American Cyanamid, and D. J. O'Conner, Jr., president of Formica, state that the new plant brings together three important elements.

First is availability of adequate timber supplies in that immediate area of North Carolina. The dominant species used will be Southern Pine. Second element is the background of Formica Corporation in manufacturing and marketing Formica. Third element is the parent company — American Cyanamid — which, among many other products, produces synthetic resins, an essential ingredient in flakeboard.

The plant is expected to produce approximately 40-million square feet of ¾-inch flakeboard. The end product will become an alternative to lumber and plywood as an underlayment for Formica and other laminates used as counter tops, in furniture and for other products.

Sheet sizes of Flakeboard produced at the Farmville plant will run up to 6′ x 12′. Process and plant design will permit making boards from ¼" to 1¼" thick. Many types of surface treatments are possible. The modulus or rupture of Formica Flakeboard is a minimum of 3500 psi. Screw holding power is 350 lbs., directly, and 225 lbs. laterally.

William F. Drees has been named sales manager of the newly formed special products division and will have charge of Flakeboard sales, headquartered in Cincinnati, Ohio.

Thomas J. Canning has been named plant manager.

American Cyanamid, with headquarters in New York, is celebrating its 50th anniversary this year. The organization is one of the leading chemical producers in the nation and operates 40 plants and laboratories in the United States and abroad. Sales last year totaled $500,000,000.

Board Consultations Held

THE NEED FOR a balanced appreciation of the current state of knowledge concerning the scientific, technical and economic aspects of the production, marketing and use of wood based sheet materials is the principal reason for the first world-wide Consultation on manufactured boards, Mr. Marcel Leloup, Director of the Forestry Division of the Food and Agriculture Organization, said at the opening ceremony of the Consultation in Geneva in January. The FAO sponsored the Consultation in co-operation with the secretariat of the United Nations Economic Commission for Europe. The Consultation lasted from January 21 to February 5.

Mr. Leloup pointed out that while production of insulation board, hardboard and particle board had risen spectacularly from 800,000 tons in 1938 to currently more than 4 million tons, both production and consumption are concentrated today in a few countries. Sweden uses 22 kg of fibreboard per inhabitant, Mr. Leloup said, and he compared this figure with that of 2 kg per inhabitant for France. At the other extreme, very large countries like India or Brazil have a per capita consumption of less than 0.1 kg.

Mr. Leloup ascribed the success of the board indusrty to these factors:

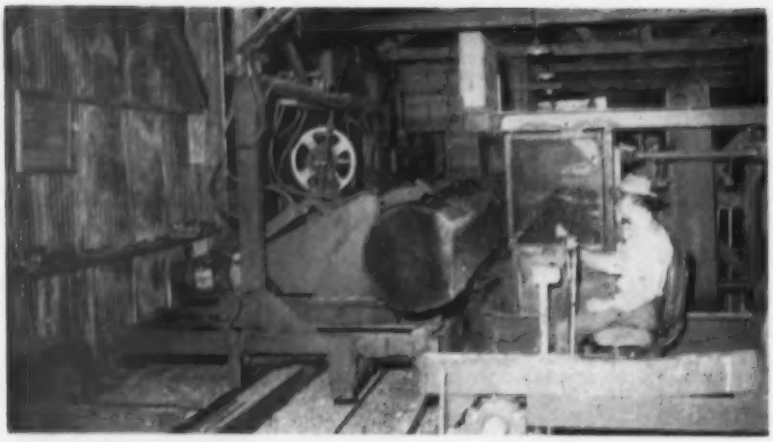
• The panels constitute a structural material which is relatively cheap and of excellent quality;

• Much of the raw material is industrial or forest waste or forest species which previously had little commercial value;

• Setting up a board factory requires less capital than pulp and paper industries or many other modern industries, a factor of some importance to countries where the supply of money for capital investment is limited.

Some 100 background papers were prepared from which the Consultation assessed the curent situation in board industries from the scientific and technical point of view and also from the economic standpoint. From papers presented, it seems possible to manufacture woodbased sheet material in nearly every country in the world, Mr. Leloup said. This Consultation was for the purpose of expanding technical knowledge for the benefit of manufacturers, marketers and consumers.

A feature of the International Consultation Boards was the organization of an exhibition to show latest developments. Six hundred specimens of boards and raw materials were contributed by commercial concerns and technical institutes. The display also included several small scale models of plants and more than 100 photographs and charts to illustrate different types of equipment and processes of manufacture. The exhibition was the first of its kind to be organized at a technical meeting.



DOUBLE CIRCULAR headrigs cants logs for gang mill, has Master Electric Co. 440 V 125 hp. motor. Sawyer-operated carriage takes logs to 24' long, 33" diameter, has "Redco" 10-set electric setworks with Selectric controls, "Redco" electric motor drive for carriage feed.

Flexibility Pays Off For This Sawmill

With minimum manpower, Arden Lumber Co. cuts 45M bd. ft. of dimension lumber per shift.

CONCRETE POND at Arden Lumber Company, Colville, Wash., is kept filled with water from a dug well on the millsite; logs shown here in storage pond are larch and Douglas fir variety.

SPECIALIZATION AND FLEXIBILITY of operation are paying off for Arden Lumber Co., Colville, Wash., which actually was able to increase production last summer when many other mills were faced with a slump. How? By building a new mill designed for maximum production of dimension lumber wtih minimum of manpower.

With an average daily production of 45M, Arden cuts about 900,000 bd. ft. per month, all in 2x4, 2x6, 2x8, 2x10 and 2x12. Major species are larch and Douglas fir, shipped out in box cars from a spur on the Great Northern RR on the mill site.

Now complete, the mill for the first year of its operation added one major component at a time. Ground was broken in April, 1955. First lumber came out of the Superior 24x24" gang mill in July, 1955. With the gang alone the mill produced and shipped an average of 35M per day of rough green dimension. Next major addition was a new Newman 500 planer in May, 1956. On July 25, a double-circular headrig and a sawyer-operated carriage equipped with Selectric control on the setworks was put into production.

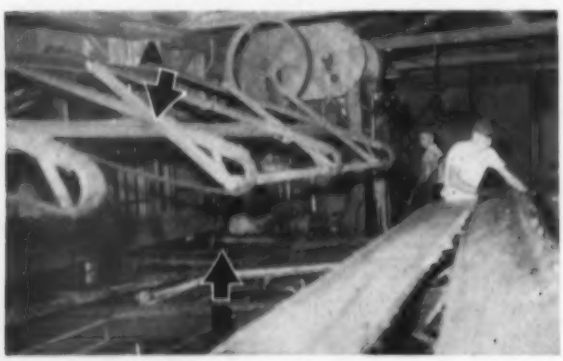
THE MILL NOW CAN: (1) run gang and circular headrig simultaneously or (2) operate the gang only or (3) the circular mill only. Each saw has its own log haul and log deck. If one unit needs repair, the mill need not slow down production—it switches over to one saw completely until the other is ready to go again.

The sawmill crew totals nine, including one man on the pond and two men attending the automatic sorter. All carloading is done by one man, on contract. (See diagram for placement of workers.)

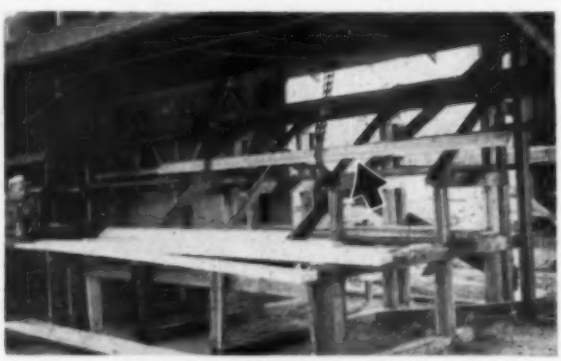
Current operation consists of a combination set-up, with the circular mill cutting logs into cants to be gangsawed. In addition, the gang will take "pewee" logs under 20" direct from the pond and cut them into two-inch pieces.

The mill is completely electrified. All motors are AC except for the feed-

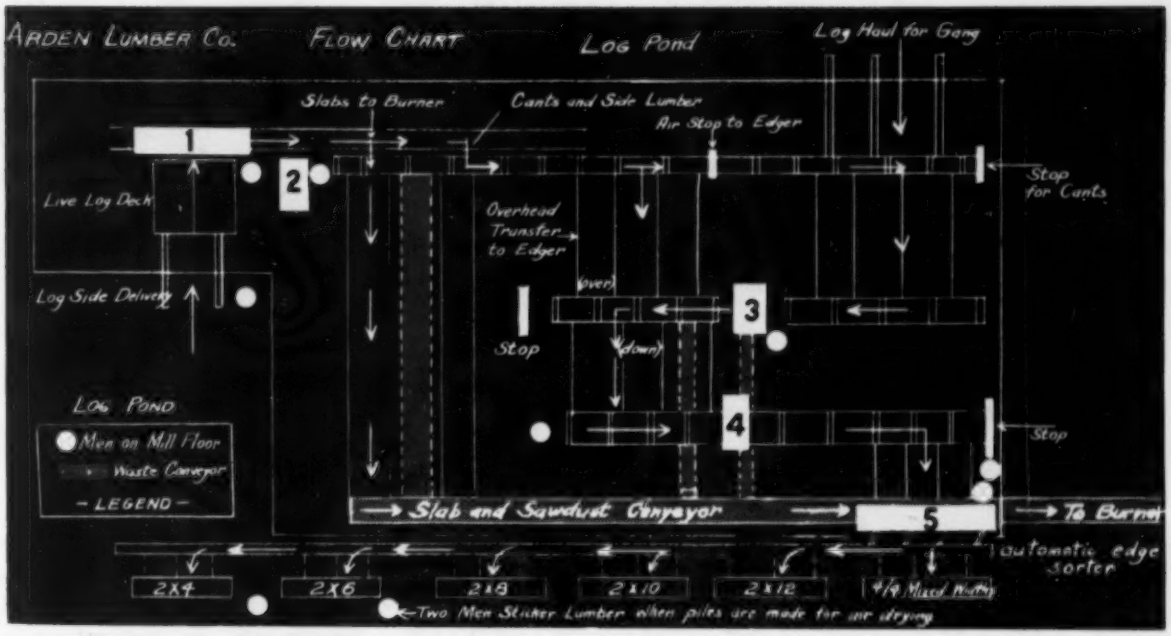
(*Continued on page* 127)



OVERHEAD TRANSFER (A) conveys lumber from circular saw offbearing rolls to edger, bridging rolls on outfeed end of gang (B).



ARROW DENOTES 2 x 6 hitting hanging chains after being automatically "picked off" sorting belt. Chains slow-down sorted pieces.



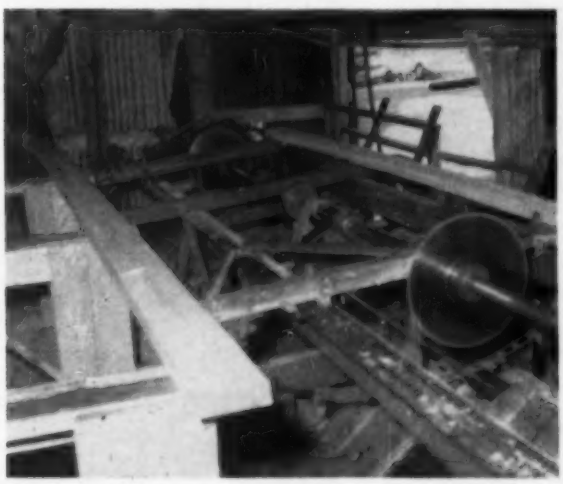
Principal Equipment
(Number refer to Flow Chart)

1. Plant-converted sawyer-operated carriage with **Radco** (Republic Electric & Development Co.) setworks, **Selectrim** controls and **Radco** 40 hp AC-DC electric motor carriage drive.
2. Double-circular headrig.
3. **Superior** (Western Steel & Supply Co.) gang mill 24 x 24-inch for logs or cants. Powered by 75 hp **Master** electric motor. Feed rolls powered by **Dynamatic** 3 hp motor; chipper roll has 15 hp motor—all AC.
4. **Schurman** edger powered by **Reliance** 7 - 75 hp AC motor.
5. **Corley** two-saw trimmer.

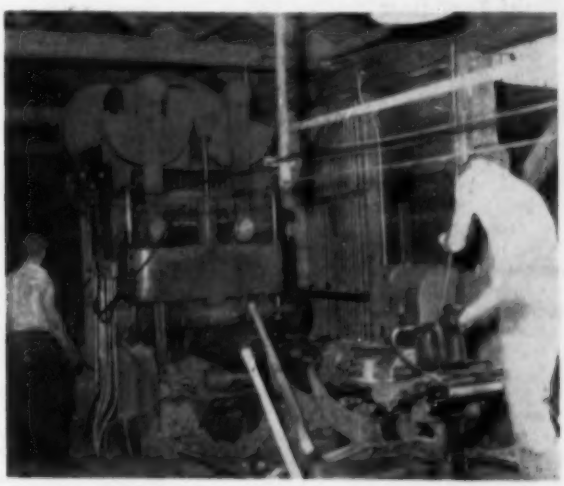
Other Equipment at Arden Lbr. Co.

Gerlinger heavy-duty fork lift truck in yard. **Newman** 500 planer. Powered by 75 hp **U. S.** electric motor.

OVERALL VIEW of edge-sorter. Arrows show chain on which lumber travels from trimmer to edge sorting bays. Pieces slide down inclines, build-up carrier loads which are removed to planer.



TRIMMING GREEN lumber in sawmill on Corley two-saw machine. Trimmed lumber falls onto edge sorting chain, travels out of mill.



SUPERIOR GANG, 24x24", takes logs or cants, is powered with 75 hp Master electric motor. Feed rolls have Dynamatic 3 hp motor.

Plywood Department

JOHN R. OSGOOD, plywood sales mgr., Robert S. Osgood Co.

Ply Executive Visits Orient

• John R. Osgood, Plywood Sales Manager for the Robert S. Osgood Company of Los Angeles, recently returned from an extended business trip to Japan, Hong Kong, and the Philippine Islands, where he contacted their major suppliers.

In Japan, he visited many of the large lumber and plywod mills, and saw first hand the rapid strides being made to produce export-grade lumber and plywood. He found that in addition to installing new equipment, Japanese plywood mills are constantly developing new products to sell. These are, principally, V-grooved plywood in both Philippine Mahogany and native Japanese hardwoods, lumber-core plywood, and exotic or fancy plywoods in such species as Teak, Koa, Rosewood and Ash. These fancy plywoods are made in a variety of patterns, including checkerboard, herringbone and diamond-match.

In the Philippines, he found development of the infant plywood industry both interesting and impressive, due to progress made in the past year. Veneers and plywoods are now being exported to the United States in ever increasing quantity. As in Japan, he was conscious of the agressive attitude of both the lumber and plywood industry.

Plywood Used for Cold-Test Box

• A cold-test box of plywood construction is being used with satisfactory results in testing the equipment of a 15-ton mobile refrigeration plant at the Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Va.

Although the box was designed to go into a large test cell, where it would be protected from the weather, it is being used as a separate outside test unit. Only a coating of white paint and a canopy of canvas protect it from the elements. The interior of the box is unpainted.

Engines up to 50 horse-power, that will fit into the box, are being tested for starting and operation at low temperatures.

Three-ply ¼" plywood was used in construction of both the exterior and interior of the box, which is of knock-down construction and which is mounted on a 6-inch concrete slab.

Sales Executive Appointed

• The Coquille, Oregon, division of Textron Inc. has appointed William C. Ulett as executive vice president.

Mr. Ulett was formerly president of Sierra Plywood Distributors of San Francisco, Calif., a firm he founded five years ago which engaged in the sale of plywood nationally.

The sales force formerly associated with Mr. Ulett in the Sierra business will now represent Coquille. Headquarters will be in San Francisco, California.

Mr. Ulett stated that this was the inaugural step in the projected plans for Coquille Plywood to have its own national sales organization with representatives in all key cities.

New Plants . . .

• Western Milling Co., Philomath, Ore., started production of its plywood division in January. Capacity of the automated plant is 300,000 square feet of one eighth inch sheething daily, employing 20 men per shift. Only one shift is being operated currently. The plant has one eight-foot lathe, with a core lathe to be added later. Two clippers receive stock from six trays 170 feet long. Carl Hevlin is plant superintendent.

• The green veneer plant of U. S. Plywood Corp. at Gold Beach, Ore., began limited production early in January. On a full shift basis, the plant is scheduled to turn out 125,000 square feet of ⅜-inch veneer per shift. Production will continue on a one shift basis until spring, when a second shift will be added. Frank McPherson is general manager of the Gold Beach operation, with Leo Sensabaugh as plant superintendent.

• Drain Plywood Co., Drain, Ore., currently is operating a 10-foot lathe and a core lathe. Construction is being completed to house a boiler and 22 section, six-line dryer. When the plywood plant is completed, it will employ about 220 men, instead of the current 40. Harold M. Buckner is manager.

Mult. Ply Sells Plant

• Robert Dollar Lumber Co. at Glendale, Ore., is completing arrangements to purchase Multnomah Plywood's peeler plant there. The change was effective February 15.

The sale does not include some 50,000,000 board feet of timber owned by Multnomah in the Glendale area. The timber probably will be sold later.

Multnomah will add an extra shift at its Portland plant to meet its requirements and will not purchase from the Glendale plant.

Multnomah erected the Glendale peeler mill in 1953. Daily average cut is 1,500,000 board feet on a ⅜-inch plywood basis. It is on the Dollar pond.

STRAPPING UNIT has spool and crimper on same carriage for quick, easy operation.

Improved Strapping Of Veneer Units

Strapping of package units of veneer has been further simplified at Rochlin Veneer & Plywood Co., Willow Creek, Calif. Improved equipment permits one man per shift to strap the output of the 2-lathe plant.

The strapping equipment is a modification of the arrangements described on page 156 of *The Timberman*, January 1956 issue.

The strapping area includes four stations for bundles of veneer. Two are for core stock and two for 8-foot material. Each has a pair of bunks with slotted tops to permit the passage of the strap under the length of the bottom cleats after the veneer has been deposited on top of them.

The stations are in a row along one side of the building, and the stock is brought to them and removed from them by a lift truck. Suspended above the strapping stations is a monorail supporting a small 4-wheel carriage. Attached to the carriage on a short steel bar are both a spool of strapping and a Chicago Pneumatic balancer. The balancer holds up a Signode air-operated crimper.

With this arrangement, the man can quickly move the strapping and crimper to any place along the line. The Signode strapping is ⅝ x .023-inch. James L. Kinsey, plant superintendent, says that the man has time to occasionally assist the lift truck operator in getting stock to and from the strapping area.

Plywood Department

Western Hardwood Faces Hold Plywood Promise

VETERAN HARDWOOD MEN had their first look at several new western hardwood plywood panels on display at the January 19 meeting of Northwest Hardwood Association in Seattle, Wash. W. E. Difford, managing director, Douglas Fir Plywood Association, addressed the group on the opportunities in utilization of western hardwoods for interior plywood panelling.

The displayed panels, courtesy of the Douglas Fir Plywood Association, were faced with sliced myrtle, walnut, oak and madrone. These were obtained from stands near the California-Oregon border and manufactured by a plant at Crescent City, Calif. Mr. Difford stated that DFPA had contacted architects and designers throughout the country and that their response to sample western hardwood panels had been enthusiastic and encouraging.

Mr. Difford explained to the group how west coast softwood plywood mills had managed to greatly increase their annual output during the last 15 years in the fact of dwindling supplies of high grade face veneers. The sheathing market has been the greatest factor in utilization of available peeler logs of lower grades, he said. He cited other ways in which western plants had met the challenge of reduced supplies of old growth Douglas fir, e. g., the selection and development of hemlock and various other softwood species for veneer.

The speaker expressed doubt in the economic validity of western mills depending upon eastern and foreign sources for highgrade face veneers, which have to be shipped long distances, first to be manufactured, and second, to be marketed. Mr. Difford felt that the greatest opportunity before the industry was to obtain maximum utilization from the trees in the west.

Mr. Difford stated that there are now cant slicers on the market with which it is possible to obtain high quality sliced veneers on a basis not previously possible, such as speeds of 100 slices per minute. Rotary cutting of native hardwoods has always presented certain problems and has never been very popular, he indicated.

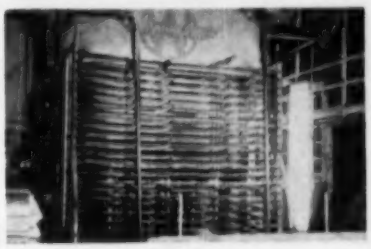
Mr. Difford told THE LUMBERMAN that while the DFPA does not have a formal program on hardwood plywood underway, the association is nevertheless exploring the various opportunities involved and is encouraging its members to take careful and closer looks at slicing native veneers.

JEFFERSON PLYWOOD CO., Madras, Ore., reopened in late January, after having been closed down since mid-November. A new building has been completed to house a finishing department and supply storage space.

Two Plants Solve Lighting Problems

Lighting problems in two West Coast plywood plants have been solved with recent installations. At Puget Sound Plywood, Inc., Tacoma, Wash., the lighting problem existed at the grading table. The solution arrived at was 8-foot lights of plywood reflectors using five parallel 150-watt globes mounted behind frosted glass. The three units are mounted from the plant ceiling so as to shine sideways as well as downward. An adjustable plate in front of the unit can deflect light where it is needed.

Evans Products Co., Winchester, Ore., had its problem at the offbear side of its Washington Iron Works 20-open hot press. The solution is the use of a fluorescent light bank mounted at one side of the offbear end. The excellent cross lighting allows the press unloader good visibility in his work. Four General Electric 96-inch T12 standard cool white tubes are used in the unit.



LIGHT INSTALLATIONS. Puget Sound Plywood has home-made lights, above for grader. Evans has fluorescent bank at press.

Plywood Co-ops Organize

• Plywood cooperatives of Oregon, Washington and northern California have formed a trade organization known as the Worker-Owned Plywood Association.

Purpose of the association is to collect, compile and disseminate statistical data relative to the plwood and veneer industries. Some 24 of the region's 32 worker-owned plywood cooperatives were listed as incorporators and are represented on the board of directors.

Secretary-manager is Bronson Lewis, formerly with Lacey Plywood, Tacoma. Association headquarters will be located in the Security Bldg., Olympia, Wash.

John N. Martinson, Puget Sound Plywood, Inc., Tacoma, was elected president of the new group. Other officers are Floyd Van Horn, Standard Veneer & Timber Co., Crescent City, Calif., vice president; Monford A. Orloff, Mount Baker Plywood, Inc., Bellingham, Wash., secretary, and Cecil A. Brookshire, Multnomah Plywood Corp., Portland, treasurer.

How the Russians Do It

• Hector Stone, Canadian lumberman, reports seeing plywood plants in Russia during his tour there last year. The timber is comparatively small, and peeler logs are the size of cores which are left over in American plants. These blocks are peeled down to a diameter of two inches. The end product is a panel knottier and rougher than American plywood but nevertheless an article of economic importance in Russia.

New Concrete Form Panels Cut Costs

• A new concrete form method which completely eliminates conventional studs and walers has some contractors reporting form work going twice as fast with the new method. Other builders say a 50-60% reduction in labor costs is possible by using the new low-cost form, which consists of thick fir plywood panels and special fastenings.

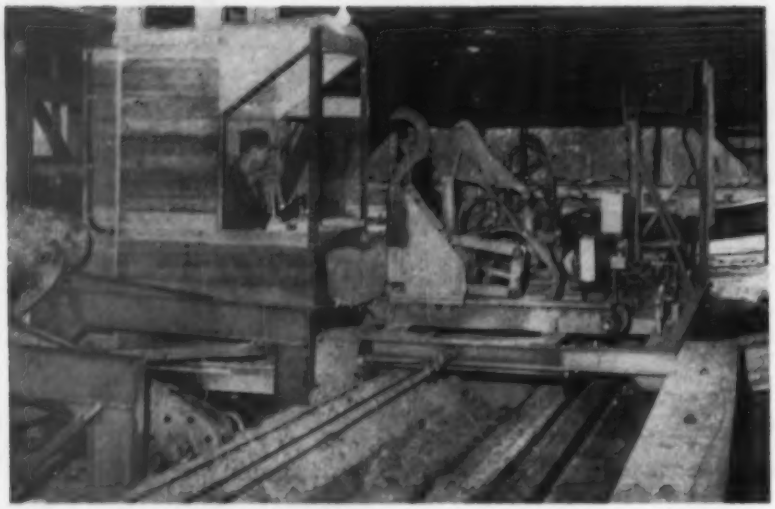
The new forming technique has been perfected and proven over a three-year period by FormCo., Inc., of Rockford, Illinois, and has now been patented (No. 2,776,464). It is designed to provide a sturdier, more easily constructed form for application on all types of industrial, commercial and residential forming as well as in bridges, reservoirs, culverts and manholes.

The new method has been engineered to save on-the-job construction time and to minimize the amount of fabrication necessary before the materials are shipped to the job site. The panels are 1⅛-inch exterior type fir plywood which have been pre-drilled and pre-fitted with special, rust resistant fastener hardware. Only DFPA grade-trademarked fir plywood is used for FormCo forms.

Co-op Mill Sold

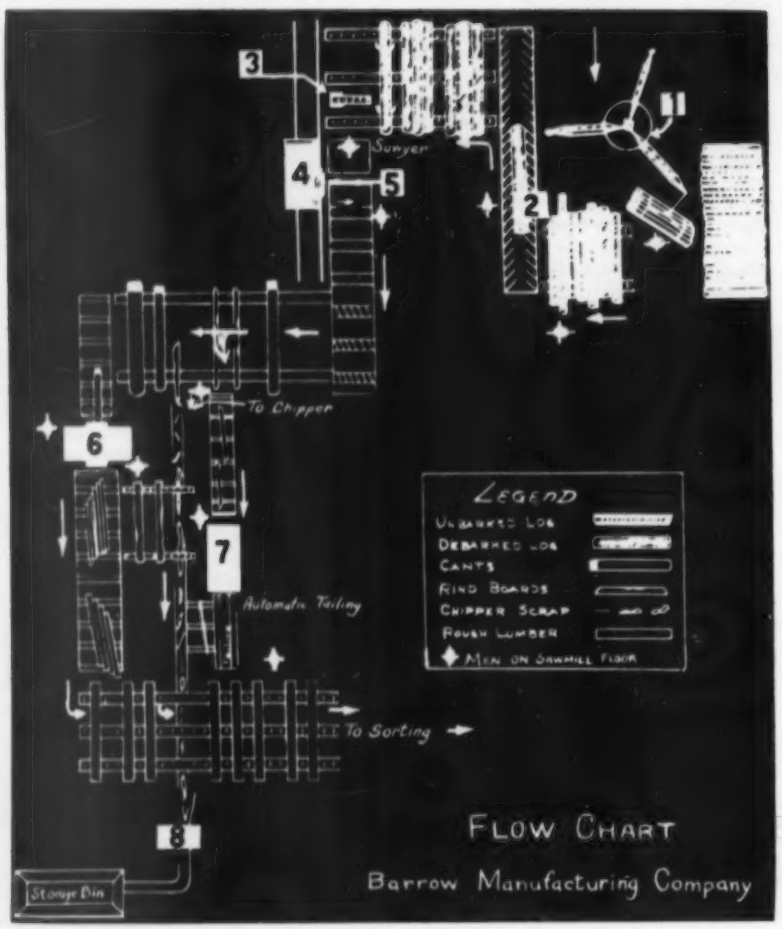
• The National Plywood Cooperative plant at Independence, Ore., has been sold to Aberdeen Plywood Corp., Aberdeen, Wash.

The company does not plan to operate the Independence mill because it does not own any timber in the area. The cooperative closed its mill in December, 1955, after operating for about nine months.



SAWYER AT CONTROLS of the Mater Riderless automatic carriage at Barrow Manufacturing Co.

Southern Mill Installs Riderless Carriage



FORTY - SIX - YEAR - OLD Barrow Manufacturing, near Ahoskie, North Carolina, has become the focal point for mill operators interested in seeing if highly mechanized automatic equipment widely used in the West can help increase of efficiency of Southeastern mills. Manager John K. Barrow, Jr., in 1956 installed the first automatic sawmill equipment in the area.

John Barrow says "Our capacity is up (to about 35,000 bd. ft. per day) but the cost of manufacture per 1,000 ft. has gone down". He believes, along with other operators, that mechanized equipment belongs in Southeastern operations, even though logs are generally smaller and hourly labor costs less than in Western mills.

Mr. Barrow started his mill modernization about two years ago, with a new building. Equipment was installed a little at a time so as not to interrupt production; actually, only three weeks operating time was lost. In the mill yard, a boom crane unloads an entire load of logs from an incoming log truck. Logs are debarked before being conveyed to the mill delivery deck. Sawyer Randolph Minton takes over from there. The accompanying flow chart illustrates the lumber processing pattern and identifies the principal equipment.

With the Mater carriage and the Dominion gangsaw (another first in the area) working as a team, Barrow was able to increase his cut markedly in a short time. A B. L. Montague conveyor takes the lumber from the carriage to the gang mill. Cants are gang sawed; jacket boards edged, and the scrap conveyed to the chipper.

Another feature of the new Barrow mill is the automatic edger tailing device, which automatically sorts boards from strips, eliminating one man at that point. Chips are blown into an elevated chip storage bin, with space underneath for a semi-trailer. They are then transported to the papermill. Sawdust and bark are the only leftovers from this mill. These are handled by a conical shaped forced air burner with a capacity of 45,000 feet of residues per day.

The entire Barrow Mill was planned by B. L. Montague Company, Sumter, South Carolina, who also furnished the Dominion Gang, Mater equipment, and other items. The mill cut its oper-

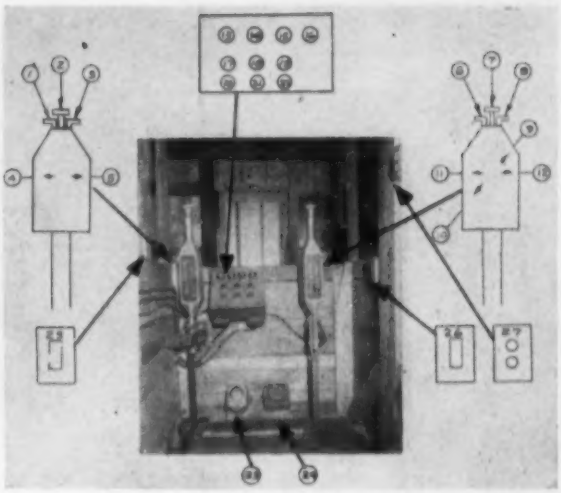
Principal Equipment

(Numbers refer to flow chart)

No. 1, **Clyde** stiff-leg derrick; No. 2, **Soderhamn** D-3 flail barker, with 30 hp **Westinghouse** electric motor at flail head, five hp on feedworks and five hp on hydraulic pump; barker machine frame was reinforced and bark skirts installed to protect ball drive feedworks; No. 3, **Mater Machine Works** Woodcock bar turner; No. 4, **Mater** automatic carriage (with pantograph), driven by Mater No. 35 hydraulic feed.

No. 5, circular saw; No. 6, **Dominion** No. 25 oscillating gang saw with continuous feed with no overhang, driven by 75 hp **Louis Allis** motor; No. 7, Model 2-D **Wheland** edger, heavy duty, with 48 inch opening; four saws, two middle stationary and two outside movable; has automatic tailing device; No. 8, **Soderhamn** model HF-60 chipper, driven by 100 hp **Westinghouse** motor.

SAWYER CONTROLLED Mater Bar Turner. Note lack of men on deck.



SAWYER'S CONTROLS, at right, on the Mater riderless carriage. Number indicates action: (1) Manual headblock setting (slow); (2) Manual headblock setting (fast); (3) Recedes headblocks; (4) Carriage feed - push; (5) Carriage return - pull; (6) Undog; (7) Dog; (8) Hammer dog; (9) Raise Woodcock Turner-push; (10) Lower Woodcock Turner-pull; (11) Rotate Woodcock Turner-left; (12) Reverse Woodcock Turner - right; (13) 8/4 Preset button; (14) 6/4 Preset button; (15) 5/4 Preset button; (16) 4/4 Preset button; (17-22) Setouts on headblocks; (23) Stop and loader; (24) Cant flippers to unload the carriage; (25) Emergency stop; (26) Live deck control; (27) Oil gear start - stop buttons. One man controls all Barrow operations.

ating costs; workers produce more lumber per man with less effort. Mills can pay better prices for timber because of lower operating costs, and forest resources are conserved by the use of leftover products.

Dip tank process has been set up for Seattle Box Co.'s first orders for colored wooden boxes. EMMETT J. NIST (L), Supt. FRANK R. DAVIS examine pink-dyed covers for boxes. Dipping solution is a mixture of concentrated chemical dye and water.

Historic first load of pink dye-colored wooden boxes shown at Seattle Box Co. plant. Company offers large choice of colors.

Now It's Colored Boxes!

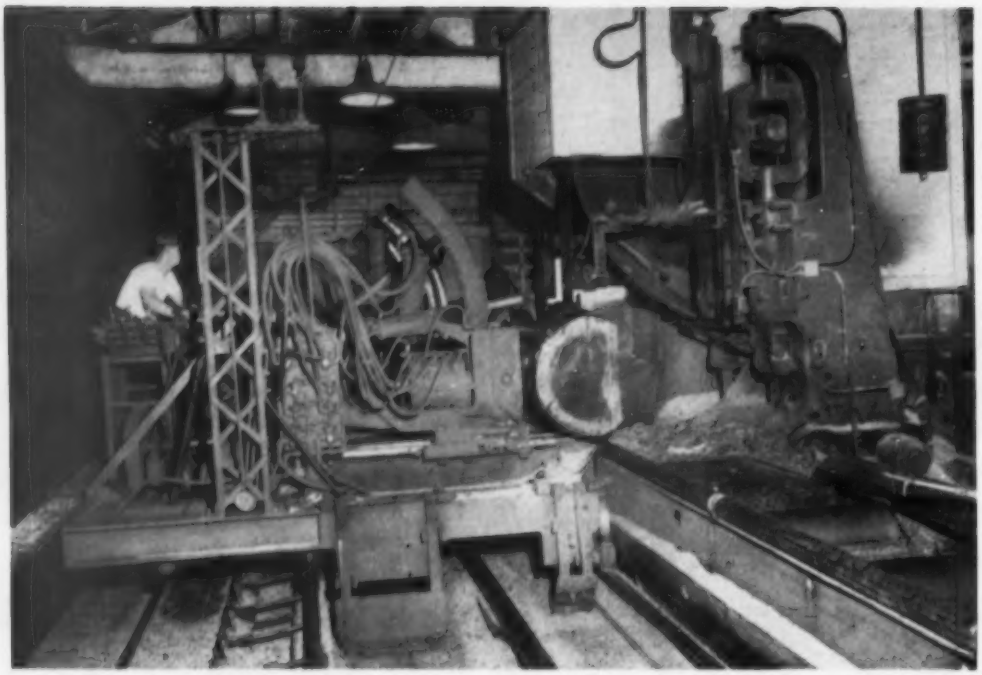
• A step forward in glamorization of wood has been made by Seattle Box Co., Seattle, Wash., which recently shipped its first order for colored wooden boxes.

Following a series of tests and experiments, Seattle Box is now prepared to offer its customers a wide variety of colors. The initial shipment consisted of wooden boxes colored a "shocking pink" for the Haines Oyster Co. of Seattle for the transporting of jars and cans of seafood. The conventional black printing on the boxes was highlighted, rather than dulled, by the pink coloring.

The colored wood is achieved by dipping the entire box in a vat filled with a water and dye mixture. The dye is received at the plant in a highly concentrated form and mixed on site. Participating with Seattle Box in developing the color process were DuPont and the National Aniline Division of Allied Chemical & Dye Corp.

Emmett J. Nist, of the Seattle Box Co., told THE LUMBERMAN, "We are well aware of the inroads being made by competitive materials into the wooden packaging field. We are constantly searching for new ways in which to dress up our products and make them more appealing to our customers and to the eventual consumer. We believe that in the use of color wood takes on an entirely different appearance, and it is hard to believe these new colored boxes are 'the same old wood.'

"Production-wise, the cost of the color is a minor item. However, the labor cost in applying the color is a major hurdle. We plan to overcome this through the setting up of a production-line dipping. Also we plan to dip only the shook in the future, rather than the entire box as in the first shipment. It takes about 30 seconds for the dye to penetrate. So far we have produced sample boxes of blue, gold, green, purple and pink. The colors are fast, as proved by extended moisture exposure tests."



IN MODERNIZING its Bend, Oregon, plant, Brooks-Scanlon, Inc., installed new Klamath Iron Works carriage, fitted all three headrigs with anti-friction bearings and trued up bandwheels. Installation by Klamath Iron.

Mill Modernization Program Accents More Accurate Sawing

Brooks-Scanlon, Inc. in Oregon initiates long range plant conversion program.

A MODERNIZING PROGRAM initiated by Brooks-Scanlon, Inc., Bend, Ore., in its 200,000 bd. ft. per shift sawmill has involved considerable revamping of facilities.

Several changes involve other than lumber processing and handling facilities. Shops have been concentrated, including pipe, electric and machine. These units, previously in separate structures about the plantsite, have been moved into new, modern, well lighted quarters incorporated into the sawmill structure. This section, into which the plant's industrial warehousing facilities have also been moved, occupies the entire back end of the sawmill building beneath the operating floor. Machinery of back end of the mill is located on the main level, leaving the ground floor unencumbered.

The Austin Co. made an extensive addition of steel framework—beams and columns—throughout the structure to provide additional stability. Some 10,000 sq. ft. of corrugated, translucent "plastic glass" (both "Everlite" and "Vinylite") was installed in exterior walls for natural lighting.

Transportation improvements in the sawmill include:

- Replacing wooden frames of roll casings with steel.
- Replacing a circuitous conveyor, taking sawdust from the plant's eight ft. band resaw to the power plant, with an Anderson blower system which goes directly from resaw to boiler plant.
- A single conveyor providing fuel for the boilers has been replaced by two fuel conveyors, one for hog fuel and the other for planing mill shavings. Prior to this changeover it was difficult to properly mix fuels.

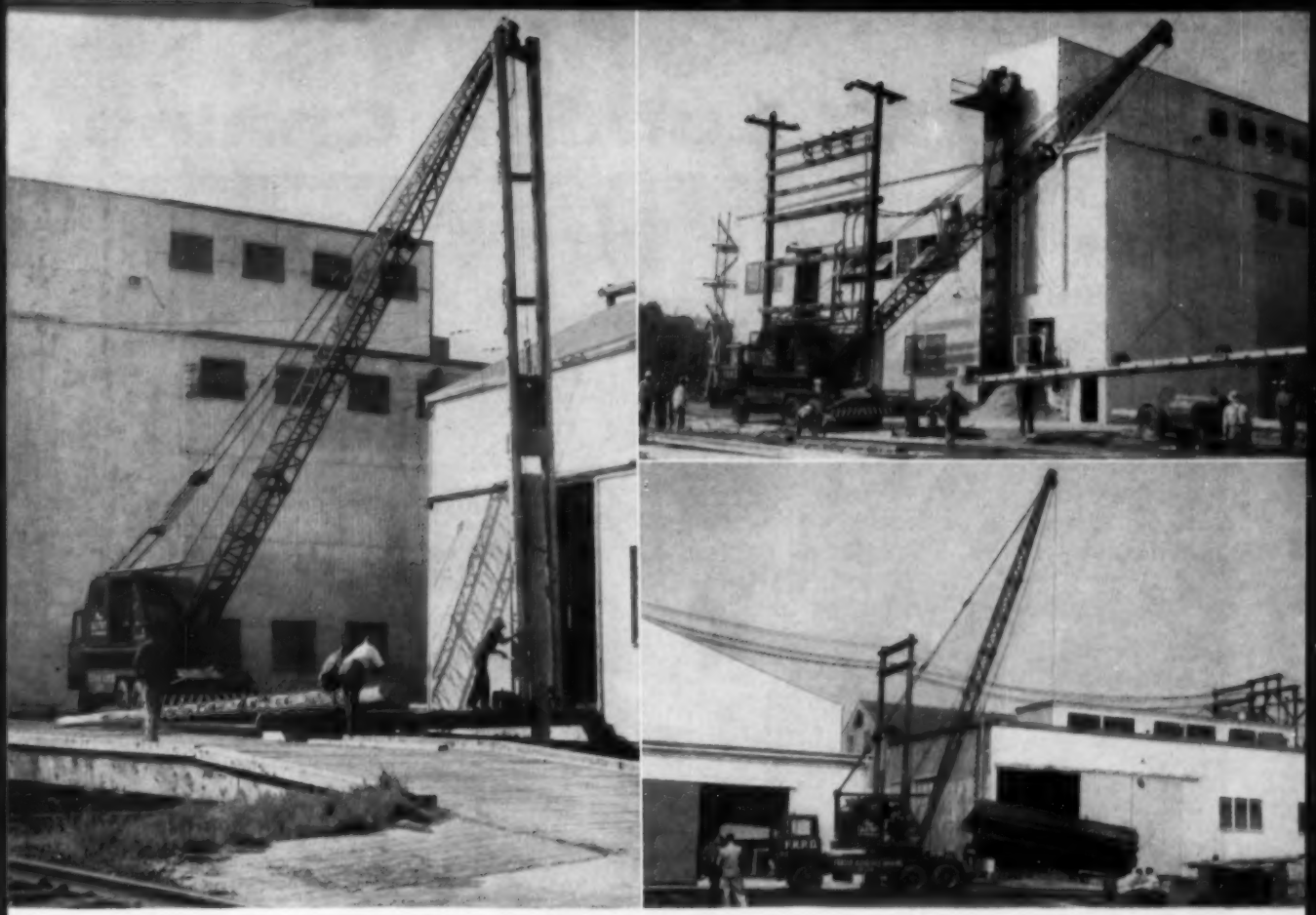
HOW DOES MANAGEMENT go about modernizing a three-headrig band sawmill that was erected in the early 1920's as one of the most modern lumber producing operations at that time?

LAST OF THE SIX 610 hp. furnaces were shortened early last summer to make for better combustion, less smoke, and to increase general boiler plant efficiency. Facilities are planned which will return all exhaust steam from mill to power plant, where it will pass through heat exchangers for heating deaerated feedwater, thus raising temperature of feedwater from 170 to 225 degrees or higher.

Changes have been made in the sawmill production equipment:

- Band wheels of all three headrigs were face ground, balanced and equipped with roller bearings by Klamath Iron Works.
- Two carriages were equipped with roller bearings.
- A new Klamath Iron carriage — equipped with air-operated dogs and setworks—was installed at the "big side"—which processes larger logs. A 14-in. shotgun feed, replacing the previous 12-in. gun, was installed with this new carriage. (Of the mill's three shotgun feeds, one is 12-in. and the other two are 14-inch.)
- Former six-in. lines providing steam for each of the three shotguns have been replaced by seven in. lines to provide more consistent and positive carriage speed control.
- All three of the nine-ft. headrigs use 52-ft. single-cut 12-gauge band saws of 2¼-in. tooth spacing.
- Both sawmill edgers—a single and one double—have been equipped with ball bearings and a pushbutton

(*Continued on page* 128)



Lifting, pile-driving, cleanup . . . Canadian company's

Versatile Michigan 15-ton Truck Crane handles entire railroad trestle project ——*ALONE!*

Michigan cranes are nothing new to Fraser River Pile Driving Company, Ltd. (New Westminster, British Columbia)—they've owned eight of them. Still, there's something pretty special about being able to say "Send a Michigan" . . . knowing this *one machine alone* can handle a crane or shovel job quickly, efficiently, *profitably*. A case in point is the railroad trestle Fraser built recently for Pacific Veneer Division of Canadian Forest Products, Limited.

Drives to job at traffic speeds

To get work started with minimum delay, Fraser's 15-ton Michigan truck crane was driven in to the job over main highways. Unit was light and narrow enough to need no highway permit. Its first assignment was pile driving. A 35-foot tower was assembled to the boom end and raised into position; a 3600-pound hammer slammed dozens of pilings into place. Michigan's maneuverability really shone here, for it carried—and placed—all trestle timber and sections of pre-built bridge flooring, *as well as* the big pilings. And to finish matters, they later put a clamshell on the Michigan and cleaned up underneath the finished trestle.

"Very pleased with our 8 Michigans" says owner

It's easy to see why Fraser River Pile Driving Company has been "very pleased" with the performance of their eight Michigan Cranes. Chances are, rugged, versatile drive-anywhere units like these could cut *your* equipment headaches, too. Your local Michigan Distributor will be glad to work with you. No obligation, naturally. Or write direct to us for detailed specifications.

Michigan is a registered trade-mark of

CLARK EQUIPMENT COMPANY
Construction Machinery Division
2483 Pipestone Road
Benton Harbor 12, Michigan

CLARK® EQUIPMENT

JEFFREY Lumber Chains

make cross-handling easier

LUMBER moves easily on these special Flat-Top and Roller-Top Jeffrey chains. They find wide use on lumber sorting conveyors and related applications . . . speeding operations and reducing worker fatigue, as well as protecting material quality.

Jeffrey Transfer Chain No. 138 with Flat Top is designed with broad, flat wearing shoes the full length of the link bottoms, providing extra wearing surface. Above: lumber comes in at right angle on another conveyor, slides across Flat-Top Chain, hits backstop and continues journey.

Jeffrey Type RW Combination Chain with Roller-Top has short rolls so roll action is accomplished without pulling off adjacent boards. At left: workers sort lumber on conveyor composed of two Flat-Top Chain inner strands and Roller-Top Chain on two outer strands.

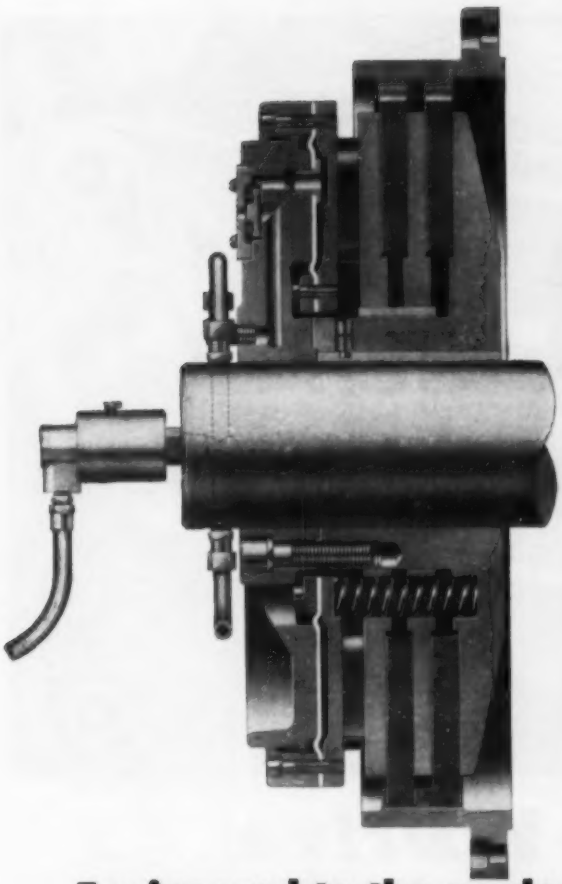
Maintenance men like Jeffrey H Type Mill Chain

Jeffrey H Type Mill Chain is exceptionally durable, designed for speedy operations where shocks are frequent and semi-gritty conditions are encountered. Flared-out side bars form broad wearing shoes, for dragging over runways, giving longer life. At right: lumber coming from mill on belt conveyor in background rides this 5-strand H Type Mill Chain conveyor which terminates in a sorting table.

Jeffrey chains and attachments are stocked for your convenience by Jeffrey distributors. Or write to The Jeffrey Manufacturing Company, Columbus 16, Ohio.

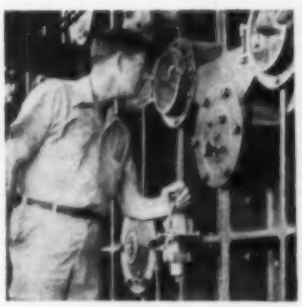
JEFFREY

CONVEYING · PROCESSING · MINING EQUIPMENT · TRANSMISSION MACHINERY · CONTRACT MANUFACTURING



DODGE AIR-GRIP CLUTCH

Engineered to the modern demand, a *New Air Clutch* ...with amazing sensitivity...compact...cooler in operation...built-in quick release valves...



Finger tips on the throttle bring instant response, give the operator split-second control. This new product of Dodge is the quickest-acting air clutch available!

New design and engineering by Dodge achieve this exceptional control—in a clutch that provides maximum torque capacity in minimum space. Less air is used to operate the clutch—the result is a new sensitivity that enables the operator to "inch" the clutch, or to throw it into full engagement as required. Where instant disengagement is needed, quick release valves are built into the clutch itself, as optional equipment.

The unique design of the Air-Grip Clutch places the air seal disc at the end *farthest* from the pressure plates, which generate the heat inherent in clutch operation. This, combined with automatic internal ventilation, insures cooler operation and longer life under severest service. Provision is made for mechanical engagement of the clutch if the air supply should fail.

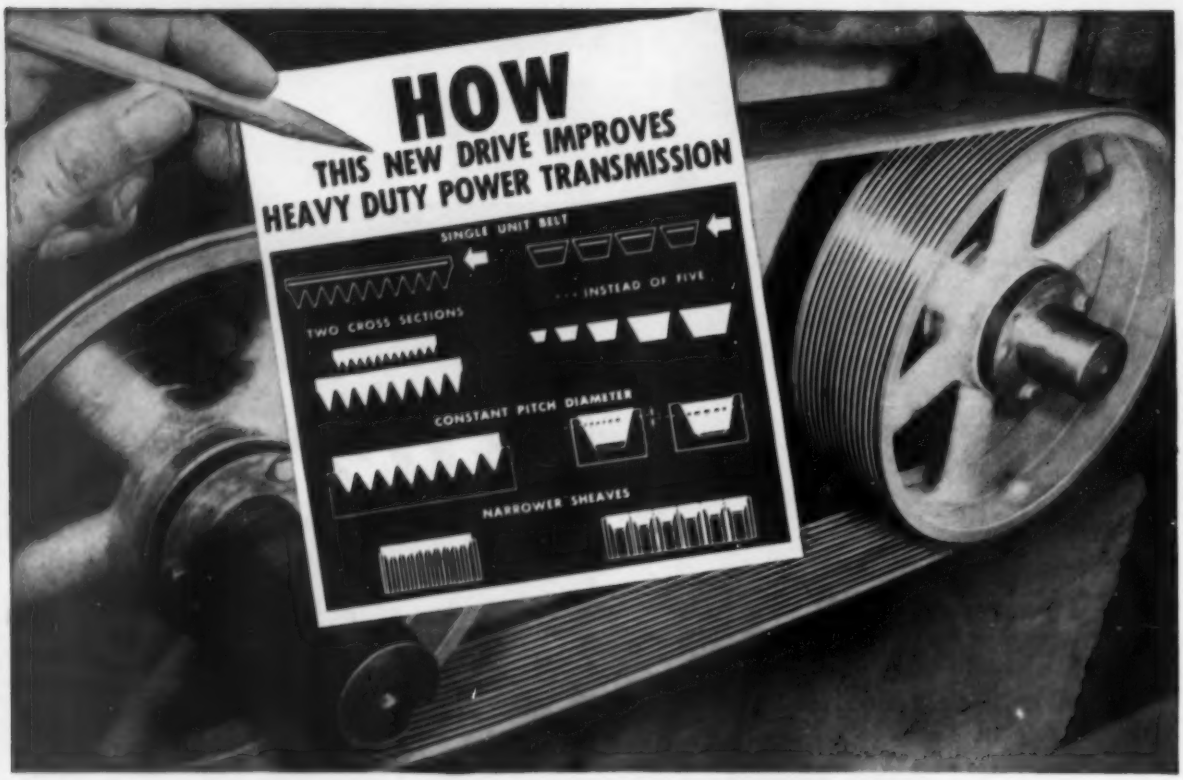
Thorough tests in the field as well as in the laboratory assure you of Dodge dependability in the Air-Grip Clutch. Available in sizes from 8.5 to 460 hp at 100 rpm at 80 psi. Call your local Dodge Distributor or write for Bulletin A634.

DODGE MANUFACTURING CORPORATION
900 UNION STREET, MISHAWAKA, INDIANA

DODGE
of Mishawaka, Ind.

Sixty years of experience in serving industry's clutch needs . . . manufacturer of the famous Dodge Diamond D and Rolling Grip mechanical clutches.

Call the Transmissioneer, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Machinery" in your classified telephone directory, or write us.



R/M *Poly-V® Drive*

Delivers More Power in Less Space!

No other belt drive can deliver as much power in the same space. It's R/M's patented Poly-V Drive developed by R/M engineers after years of research. This totally new concept in power transmission delivers up to 50% more power than a conventional V-belt drive of equal width.

Unique design accounts for the unusual power capacity of R/M Poly-V Drive. A *single, endless* belt with parallel V-ribs runs on sheaves specially designed to mate precisely with the belt ribs. The uniform pull of this single unit belt distributes drive load evenly over the full width of the sheave . . . gives higher horsepower capacity per inch of drive width than ever before possible.

There are many advantages in this space-saving drive wherever heavy duty power transmission is required . . . in the equipment you manufacture—or the equipment you use in your plant. Poly-V Drive has eliminated the matching problems of multiple V-belt drives, greatly increased the life expectancy of belts and sheaves and maintains more constant speed ratios under all loads. Just *two* cross sections of Poly-V meet every heavy duty power requirement—R/M Poly-V Drive cuts costly belt and sheave inventories to a new low!

Let the R/M engineers who developed Poly-V Drive work with your engineers to improve your power transmission applications. Contact R/M . . . or write for a copy of Poly-V* Drive Bulletin #6638.

CONDOR V-BELTS • R/M SUPER-POWER V-BELTS

Write for Bulletin #6868 on the complete line of Condor V-Belts for regular service on conventional V-belt drives. Also write for Bulletin #6628 on R/M Super-Power V-Belts with 40% more Horsepower capacity where needed.

**Poly-V is a registered Raybestos-Manhattan trademark*

MANHATTAN RUBBER DIVISION—PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Brake Linings • Brake Blocks • Clutch Facings • Asbestos Textiles • Packings • Engineered Plastic, and Sintered Metal Products • Laundry Pads and Covers • Bowling Balls

Modern Heavy-Duty Diesels

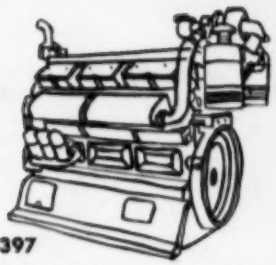
From a quarter century of diesel leadership, now comes the world's most advanced line of diesel engines

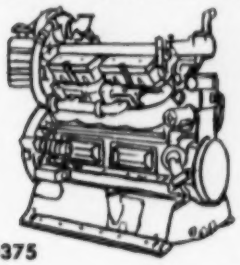
Designed and developed by Caterpillar research, these compact units pack more power in less space and deliver greater efficiency, greater economy and longer life in any application. And they're all ruggedly built for *hard work.*

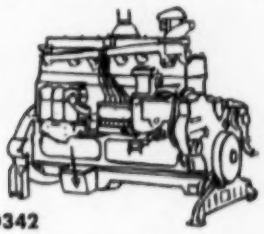
To meet your requirements, Caterpillar's modern power line is available in industrial engines, torque converter power units, spark-ignition engines, welders and electric sets up to 650 HP (maximum output capacity) and 350 KW. Also available is a complete line of marine engines up to 500 HP (continuous duty).

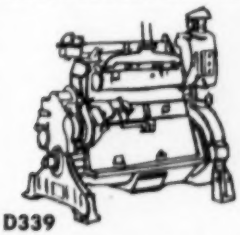
You have your choice of hundreds of variations. All units incorporate the latest advances in modern heavy-duty design. They're available as original or replacement power for excavators, cranes, ditchers, asphalt plants, crushers, compressors, welders, electric sets, pumps, drill rigs, sawmills and other equipment.

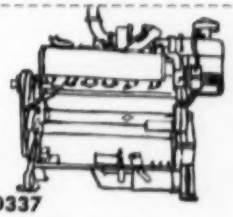
See the following pages for a summary of this rugged, modern power line. For complete information, see your Caterpillar Dealer!

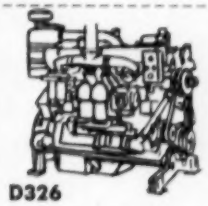

D397


D375


D342


D339


D337

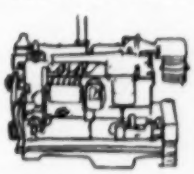

D326

D311

D315

D318

D315
(Series G)


D318
(Series G)

MODERN HEAVY-DUTY CATERPILLAR DIESELS

for Excavators, Cranes, Ditchers, Asphalt Plants, Crushers, Compressors, Welders, Electric Sets, Pumps, Drill Rigs, Sawmills and other equipment

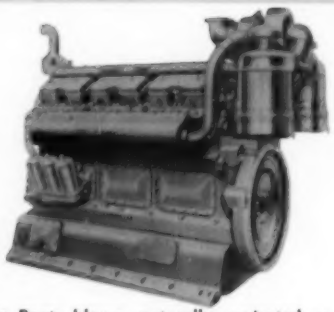
What modern heavy-duty diesels are

Compared with the heavy-duty diesels of the past, modern heavy-duty Caterpillar Diesels are compact and sturdy. They're the latest results of Caterpillar research to increase production and lower operating costs in your equipment. Manufactured by modern techniques from modern materials, they save space, fuel and maintenance time in any application. Bulk has been eliminated. Power and longer life have been added by superior design and metallurgy.

Why they do a better job than ever

Caterpillar's modern heavy-duty diesels feature the four-cycle design which provides a smooth, long, effective power stroke and a more efficient utilization of power. They require practically no attention. Their fuel system requires no adjustment. There are no cylinder ports to clean. And Caterpillar's single-orifice fuel injection valves combined with the precombustion chambers permit use of a wide range of fuels including premium diesel fuels as well as low-cost No. 2 furnace oil. All these and other features add up to new performance standards in diesel power!

For complete information about modern heavy-duty diesels, see your Caterpillar Dealer

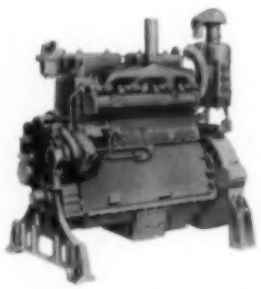


D397

with Turbocharger

650 HP*

Also available as a Roots blown, naturally aspirated or spark-ignition engine, and as electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

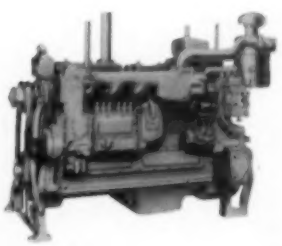


D339

Naturally Aspirated

140 HP*

Choice of air, electric or gasoline starting system.



D318

Naturally Aspirated

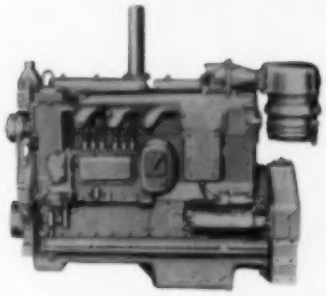
137 HP*

Also available as an electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

NEW D318
(Series G)

Turbocharged

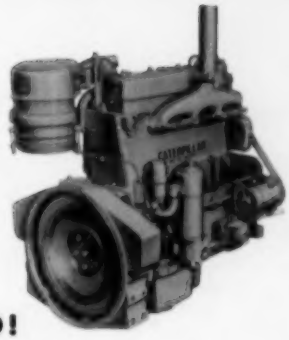
175 HP*



NEW D315
(Series G)

Turbocharged

115 HP*

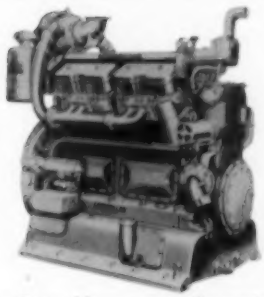


SMALLER, LIGHTER AND LOWER PRICED!

Keeping in line with Caterpillar's continued diesel leadership are these new Series G engines. They are designed for use in installations where space is at a premium. Both are small, light and low-priced; yet they deliver dependable power with the renowned Caterpillar durability. Also available naturally aspirated (shown above). Choice of air or electric starting system.

D375
with Turbocharger

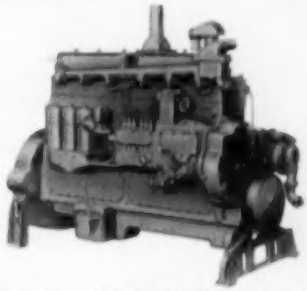
430 HP*



Also available as a Roots blown, naturally aspirated or spark-ignition engine, and as electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

D342
Naturally Aspirated

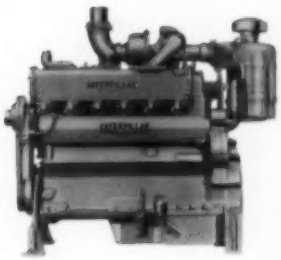
210 HP*



Also available as an electric set. Choice of air, electric or gasoline starting system.

D337
with Turbocharger

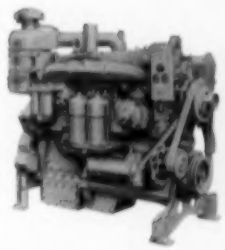
310 HP*



Also available as an electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

D326
Naturally Aspirated

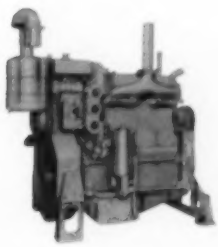
200 HP*



Also available as an electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

D315
Naturally Aspirated

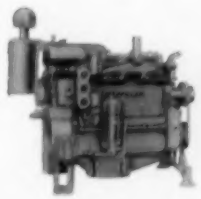
91 HP*



Also available as an electric set or torque converter power unit. Choice of air, electric or gasoline starting system.

D311
Naturally Aspirated

65 HP*



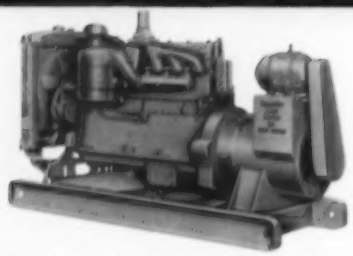
Also available as an electric set. Choice of air, electric or gasoline starting system.

*Maximum output capacity

Modern heavy-duty CAT* Diesels

ELECTRIC SETS

Dependable electric power, featuring the new Cat Generator, available in standard voltages, 60-cycle in the following KW sizes: 30, 40, 60, 100, 150, 165, 200, 225, 250, 315, 350. Also available as 50-cycle and D.C. units.



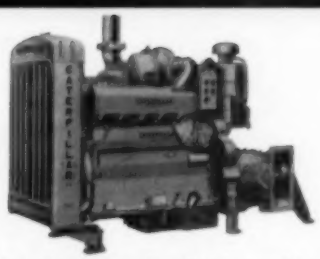
The new Caterpillar Generator brings you the best features of self-regulated and externally-regulated generators in one compact package. It means more for your money. While Caterpillar is prepared to supply you with almost any kind of generator you specify, your best buy is the Cat self-regulated Generator.

Advantages of the new Cat Generator

1. Designed to match exactly the Cat Engine powering it. **2.** Regulator with no moving parts provides steady, self-regulated voltage, no load to full load. **3.** No adjustments necessary after installation. **4.** Easily installed, no complicated switchgear or external voltage regulators are needed. **5.** Easily synchronized with other generators now in use. **6.** Big electrically, handles surge of heavy loads; rugged and easy to maintain; small and compact.

TORQUE CONVERTER POWER UNITS

Many different arrangements are available for each of six Cat Engines to provide you with a greater selection of power packages.



Wide choice of power units: Engine and torque converter; engine, clutch and torque converter; engine, clutch, torque converter and reverse gear.

Wide choice of output shafts: Standard heavy-duty drive for side loads; narrow chain housing for side loads; wide chain housing for side loads; output shaft for in-line loads only.

Advantages of Cat Torque Converter Power Units

1. Torque output is automatically matched to load. **2.** Loads start smoothly. **3.** Load movement can be controlled without using clutch. **4.** Overloads cannot stall engine. **5.** Need no special hydraulic oil — their fluid is engine fuel — fluid level automatically maintained. **6.** Cat Diesel Engine burns a wide variety of fuel oils cleanly and efficiently, even when idling.

Specify modern power—Caterpillar power!

On this page—and the three preceding pages—you've seen a summary of Caterpillar's modern heavy-duty engines. Either as original or replacement power, there's one among the hundreds of different arrangements that exactly meets your needs. Leading manufacturers of machinery can supply these models in the equipment they build. For complete details about them, see your Caterpillar Dealer. He backs you with prompt service. He has the experience and technical knowledge to help you with your power problems!

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

HUNDREDS OF DIFFERENT UNITS TO MEET YOUR POWER NEEDS

WANTED— THE HARD WORK

PRINTED IN U. S. A.

Power Feed...

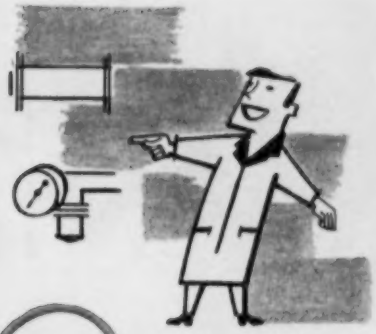
Power Clamping

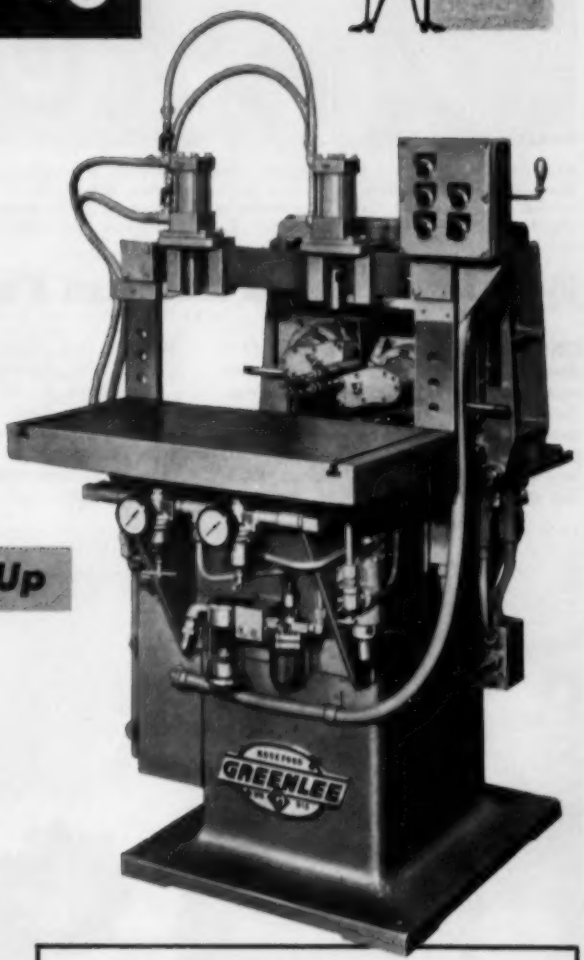
on the NEW

MACHINERY & TOOLS GREENLEE NO. 310

TWO-SPINDLE HORIZONTAL

DOWEL BORER





Easier to Operate and Set Up

■ Pneumatic power takes over! It provides a constant-feed stroke for the spindle carriage . . . holds the work firmly in place and releases it automatically at the end of the cycle. The Greenlee No. 310 Dowel Borer speeds production . . . reduces costly setup time . . . lessens operator fatigue.

Spindles can be adjusted individually from 1" to 16" horizontally and up to 8" vertically. Direct reading scales calibrated in inches permit accurate setup measurements. All controls are conveniently located.

In your plant, this machine pays for itself in a short time. Your Greenlee representative will be glad to show you how. Have him call today or write for complete details.

GREENLEE **MACHINERY FOR**
PLANING • SHAPING • TENONING
MORTISING • BORING • SAWING
Tools for Mortising, Routing and Boring

Put a Profit in Your Woodworking With Greenlee Machines

WOODWORKING MACHINERY MANUFACTURERS' ASSOCIATION WMMA

GREENLEE BROS. & CO.

1863 TWENTY-FIRST AVE.
ROCKFORD, ILL.

NEW OFFICERS of Pacific Div., National Wooden Box Assn. From left: vice pres. R. A. DeLateur, Grays Harbor Veneer Corp., Hoquiam, Wash. and pres. Seth G. Beach, Seth G. Beach Box & Lumber Co., Placerville, Calif. congratulate retiring pres. J. W. Barekman (r. center), Calif. Box Distributors, San Francisco and sec.-mgr. C. O. Thompson, Pacific Div. NWBA, San Francisco.

Box Producers Discuss Future

CROP DIFFICULTIES CAUSED a decrease in the demand for wooden boxes in the West last year. However, there was an increase in the shook used for picking boxes, melon crates, pear boxes and asparagus crates. This was reported at the 31st annual meeting of the Pacific Division, National Wooden Box Association, in San Francisco, Calif., January 25.

President J. W. Barekman, California Box Distributors, San Francisco, said that 1956 was the industry's best year for field lugs. The industry must find new markets by spending more money.

New Officers

President, **Seth G. Beach**, S. G. Beach Box & Lbr. Co., Placerville, California.

Vice President, **R. A. DeLateur**, Grays Harbor Veneer Co., Hoquiam, Wash.

Treasurer, **J. F. O'Brien**, California Pine Box Distributors, San Francisco, Calif.

Secretary-Manager, **C. O. Thompson**, Pacific Division, N. W. B.A., San Francisco, Calif.

Officers of The Wooden Box Institute include **C. O. Thompson** as president and **J. W. Rodgers**, treasurer. Directors are **Wendell Huettl**, Weyerhaeuser Timber Co., Klamath Falls, Ore.; **Wiley Williams**, Pickering Lumber Corp., Standard, Calif; **F. H. Kerss**, Golden West Box Co., Fresno; **G. Cal Setzer**; **R. A. DeLateur**; and two men to be named from the Inland Empire Box Association.

Directors of the Pacific Division of the National Wooden Box Association are **V. C. Gardner**, General Box Distributors, Fresno; **J. B. Bishop**, Weyerhaeuser Timber Co., Klamath Falls; **S. J. Starkey**, Stockton Box Co., Stockton, Calif.; **A. B. Walton**, State Box Co., Sacramento; **A. E. Macartney**, U. S. Plywood Corp., Anderson, Calif.; **A. B. Hood**, Ralph L. Smith Lumber Co., Anderson; **John Mantle**, The Long-Bell Lumber Co., Weed, Calif.; **J. W. Barekman**; **A. N. Beals**, Klamath Basin Pine Mills Corp., Klamath Falls; **Eric Engstrom**; **Floyd B. Joy**, Ace Box Co., Denver, Colo.; **Seth G. Beach**; and **R. A. DeLateur**.

Alternates include **J. C. Rassenfoss**, Pickerling Lumber Corp.; **Morris Milbank**, Rogue River Box Co., Grants Pass, Ore.; **Ray C. Smith**, Meadow Valley Lumber Co., Quincy, Calif.; **G. Cal Setzer**; **J. F. O'Brien**; **H. H. Pein**, Pein Box Co. of Oregon, Ltd., Portland, Ore.; **Paul G. Johnsen**, General Box Distributors, San Jose, Calif.; **W. C. Witter**, American Box Corp., San Francisco; **Owen Bently**, **Coast Veneer Co.**, Portland; **H. E. Pompey**, Harbor Box & Lumber Co., Los Angeles; **Rex Caffal, Jr.**, Milwaukie Box & Veneer Co., Milwaukie, Ore.; **J. Parrish**, The Diamond Match Co., Chico, Calif.; and **John Love**, West Side Lumber Co., Tuolumne, Calif.

Other meeting report highlights:

• "The wooden box industry must develop packages that lend themselves to palletization and mechanical han-

dling."—J. D. Bronson, Cascade Lbr. Co., Yakima, Wash.

• "Promotion of returnable containers is one of the objectives of NWBA." C. D. Hudson, executive-vice-president, NWBA, Washington, D. C. The association is planning to work on container developments for chain stores. Efforts are being made to eliminate captive box plants in some selected industries. In the East, the captive box industry may be greater than the commercial box industry.

• "The volume of shook produced this year will equal or exceed last year's production, if there is a normal crop" —C. O. Thompson, secretary-manager. He does not expect competitive containers to have any marked effect on the current market. There was some loss to competitive containers in lettuce and citrus last year.

• Reports for western, central and southern Oregon, California, Arizona and Colorado: Shipments of shook in 1956 totaled nearly 355 million feet, which was 9.5% below the 1955 production. Shipments of shook in 1946 totaled more than 769 million board feet.

There was a decrease of 59.4% in the number of carlot shipments of apples from California and Arizona in 1956. Peach rail shipments were off 39%, grape carlots were down 11.7%, carrots were 15.7% less, cauliflower rail shipments were down 24.8% and tomatoes decreased 10.2% in interstate shipments from these two states. These carlot figures do not include truck shipments.

• The grading rules and specifications and container development committee will give guidance on improvement of picking boxes. Palletized bins will not be promoted.

• Edge knots have been the biggest problem this year. Progress has been made in the elimination of sawdust from shook, by use of shaker tables, compressed air, or holes in saws. If edges of holes are kept square, they will remove 90% of the sawdust.

• Membership now totals 43 active members and 12 associate members.

• A new motion picture, covering the production and use of boxes from the forest to the eastern produce market, will be made for the association.

• More than 85% of the apples from the Northwest are shipped in standard wood boxes. Six thousand acres in the Columbia Basin are being put under irrigation for the first time. Some of this area includes excellent orchard locations.

• Truck shipments were up this year; many cartons went by truck. There is little or no competition from cartons in several crops, including asparagus, broccoli, cantaloupe, mixed melons, plums, pears and tomatoes. There is increased use of cartons for strawberries, lettuce and citrus.

• The Wooden Box Institute's $27,000 advertising and publicity budget includes $17,000 for advertising and the Container Development Bulletin. The contemplated movie will cost about $2500.

• Chemically treating reusable containers, such as picking boxes, has advantages. Usually, the new boxes are dipped for two to three seconds after they are nailed. Cost is about nine cents per box; the treatment lasts at least three or four years. Treated boxes maintain a good appearance, are moisture repellent.

• Cartons for grapes have not proved satisfactory. Most packers do not expect prepackaging of grapes to be any more widespread in the near future than it is now.

Honorary life memberships in the Pacific Division of NWBA were given to W. G. Kahman, retired, and James C. Leaver, Leaver Estimater, Berkeley, Calif.

The summer meeting of the Pacific Division will be held in Fresno, Calif., in July.

SAFELY and at LOWER COST

with WORLD BESTOS **LOGGERS' SPECIAL**

(heavy duty brake block combination)

Leading heavy fleet operators throughout the logging industry specify World Bestos "Loggers' Special." It's the *one proven* brake block combination that *stops brake fade*, gives *extra long mileage* and *reduces drum damage* . . . under the most severe operating conditions!

Get greater safety at lower cost for *your* fleet. Install a set of World Bestos *Loggers' Special* on your biggest rig and prove it for yourself.

the Only Brake Block with a NO-FADE GUARANTEE (heat or water)

WORLD BESTOS NEW CASTLE, INDIANA

For full information about LOGGERS' SPECIAL and other World Bestos Brake Blocks, contact one of these World Bestos Warehouses:

• LOS ANGELES, Calif., A. H. Ross & Co., 943 S. San Pedro St.
• SAN FRANCISCO, Calif., F. Somers Peterson, 197 Thirteenth St.
• PORTLAND, Ore., Sparks-Wills, Inc., 911 S.E. Market St.
• VANCOUVER, B.C., Western Equipment, Ltd., 102 Main St.

Which Extender Should I Use for Plywood Resin Glue

Ask Those Who Know!

Put this question to plywood management from California to British Columbia and 7 out of 10 will answer FURAFIL 100-S. Five years of proved performance in Douglas fir plywood production have shown them that:

1. Furafil glues are money savers. Shorter press times, faster mixing, and fewer rejects mean dollars.
2. For uniform day-to-day quality of bond, Furafil extended glues are unsurpassed.
3. Service is prompt and the supply is excellent.

If you haven't tried Furafil yet, we urge you to do so. Your inquiries are invited.

The Quaker Oats Company
CHEMICALS QO CHEMICALS DEPARTMENT

344H The Merchandise Mart,
Chicago 54, Illinois

Room 544H 120 Wall St.,
New York 5, N. Y.

Room 444H, Main P. O. Box 4376,
Portland 8, Oregon

Bradley Lumber Co. co-ordinates logging, milling, fire fighting with General Electric Two-Way Radio

Fire control savings alone far exceed cost of complete system. Immediate reporting of small forest fires and split-second communication with mobile equipment hold damage losses to a minimum for the huge Bradley Lumber Company at Warren, Arkansas. Without the instant control provided through G-E Two-Way Radio, delays might cause thousands of acres of valuable timber to be wiped out. Milton Henry, Bradley's Chief Forester says: "Our savings in fire loss, and perhaps in human life, resulting from co-ordination achieved through General Electric Two-Way Radio can only be calculated as tremendous."

Bottlenecks eliminated. Instant instructions to cutting and logging crews spread throughout hundreds of miles of wood insures Bradley the fastest, smoothest supplies of the right kinds of logs at the right time to meet hour-by-hour milling requirements. Equipment and manpower efficiency are increased, bottlenecks are eliminated, Bradley racks up real savings all along the line with General Electric Two-Way Radio.

On the air means "on the way". Bradley's General Electric Two-Way Radio system ties together mill office, wood camps, forester's trucks, log loaders, and fire plows. The advantages in control and efficiency are instant and far reaching. Learn how G-E Two-Way Radio can improve your operations. Your local General Electric Communications Counsellor will be glad to analyze your needs and advise how you may profit through better communication in your business.

For Sales and Service see "Radio Communication Equipment" in your yellow pages. Or, write: *General Electric Co., Communications Equipment, Section C4137, Electronics Park, Syracuse, N. Y.* In Canada: *C.G.E. Electronics, 181 Lansdowne Avenue, Toronto.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

Serving the Industry Since 1852

Another FIRST by WOODS

"Partners in Production"

WOODS TAPERED SPINDLE MOULDERS

137 MT-6" 134 MT-8" 134 MT-10" 134 MT-12"

and

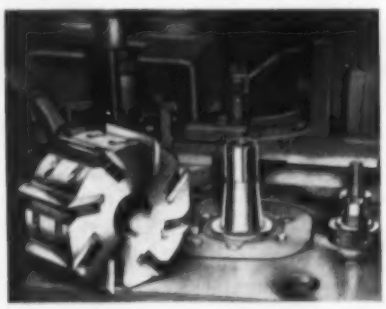
329 MT JOINTER and GRINDER

WOODS tapered spindles eliminate the use of sleeves and bushings in cutterheads, thereby giving a more rigid fit on the cutterhead spindles. Jointed knives in all cutterheads last longer on tapered spindles, improving the quality of work and increasing the production.

Cutterheads on WOODS tapered spindles can be easily removed and sent to the tool room where grinding and jointing can be accomplished with greater accuracy and less effort.

Elimination of jointing on machine allows moulder increased production time.

• Side Tapered Spindle



• Bottom Tapered Spindle

• 329 MT Jointer & Grinder with Tapered Spindles

If you are interested in higher production, better finish and economy of operation, write today to S. A. Woods Machine Company for the complete story of the outstanding advantages WOODS Tapered Spindle Moulder series has for you.

S. A. WOODS MACHINE CO.

27 DAMRELL STREET

BOSTON 27, MASS.

Branch Offices: ARK., Little Rock CALIF., San Mateo N. Y., Mount Vernon N. C., Greensboro ORE., Portland TENN., Memphis

Canadian: B. C., Vancouver, Akhurst Mchy. Co. ONT., Galt, Canada Mchy. Co.

Export Dept. United States Machinery Co., 90 Broad St., New York City

DODGE *PowerGiants*

Dodge T700
Tandem

Dodge P300
Forward-Control

Dodge 600
with Van Body

Special bodies fit readily
on any Dodge chassis

Dodge 500
Stake

Dodge 400
with Beverage Body

MOST *POWER* OF THE LOW-PRICED 3

Dodge T900
Tandem

Dodge 100
Panel

Dodge C.O.E. 700
Tractor

Dodge 800
Tractor

In every weight class

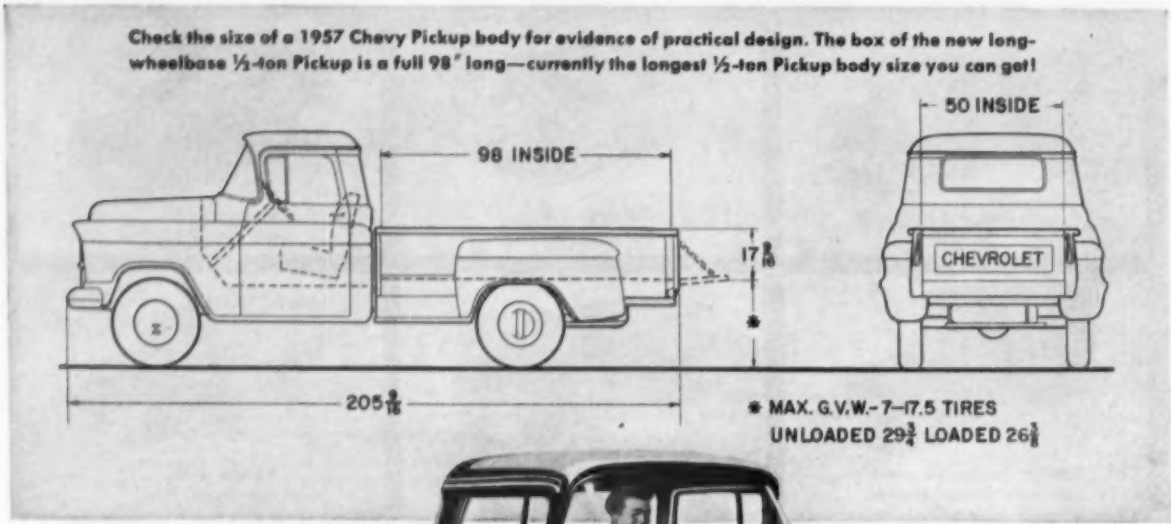
Dodge Power Giants give you an extra bonus of power.

From 204-hp. pick-ups to 232-hp. tandems, Dodge V-8's outpower the "other two" by as much as 31%. This extra power reduces engine strain, saves wear. What's more, Dodge engines, both V-8's and 6's deliver full power on regular gas.

Dodge hauls more payload, too . . . up to one-third more. And Dodge offers major advantages in driving ease, cab comfort and prestige-building good looks. See for yourself. Your Dodge dealer has a Power Giant to meet every trucking need.

DODGE TRUCKS WITH THE *FORWARD LOOK*

Pick a practical pickup!


Check the size of a 1957 Chevy Pickup body for evidence of practical design. The box of the new long-wheelbase ½-ton Pickup is a full 98" long—currently the longest ½-ton Pickup body size you can get!
98 INSIDE
50 INSIDE
CHEVROLET
17 9/16
205 3/16
* MAX. G.V.W.-7—17.5 TIRES
UNLOADED 29¾ LOADED 26⅛

This big built-for-work "box" makes CHEVY first choice in Pickups!

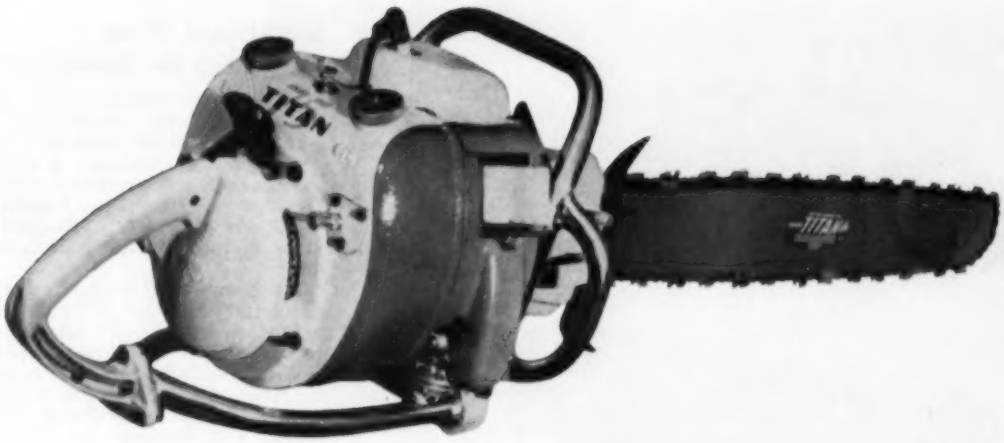
These best selling '57 Chevrolet Pickups are practical trucks in every respect. They offer modern power to keep your costs down low, modern looks to keep your prestige up high... and all these modern body advantages to help you make light work of tough jobs!

They're the most practical and profitable Pickups going! For example, they enable you to load more easily and quickly, thanks to *low* loading height and steel skid strips in the long-lasting hardwood floor. And for your bulkiest loads, stake pockets accommodate the addition of racks or side boards. Other modern advantages include extra hauling space provided by *outboard wheel housings* . . . a grain-tight tailgate with anti-rattle latch that strengthens the sides . . . and practical level-ledge side panels. Chevy gives you running boards, too, for convenient side loading. These new Pickups come in a wide range of ½-, ¾- and 1-ton models with spacious boxes ranging up to more than 9 feet in length. See your Chevrolet dealer for the one that suits your job. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

'57 CHEVROLET TASK·FORCE TRUCKS

PROVED ON THE ALCAN HIGHWAY . . . CHAMPS OF EVERY WEIGHT CLASS

CHEVROLET



Powerful TITAN recommends topnotch NICHOLSON files

"Power, performance, portability" are the three major claims of Titan Chain Saws. In addition, Titan maintains that "there's a brand-new model for every cutting job, from the lightweight Model 30 for pulp-cutting to the most powerful one-man chain saw ever built, the Model No. 75" (shown above). The popular Model 30 is also a direct-drive unit, weighs 27 pounds, takes bars from 14" to 22".

And the manufacturer of this growing line knows that saws must be properly maintained if they are to do the work that's cut out for them. That's why Titan, like other leading chain saw manufacturers, recommends Nicholson and Black Diamond files —specifically, the best-selling Round Smooth Cut Chain Saw file, available in these sizes:

3/16" diameter	9/32" diameter
7/32" diameter	5/16" diameter
1/4" diameter	3/8" diameter

Nicholson and Black Diamond Chain Saw files for every need are used, recommended and sold by leading chain saw manufacturers and are also obtainable through industrial supply and hardware houses.

NICHOLSON U.S.A.

NICHOLSON FILE COMPANY, PROVIDENCE, RHODE ISLAND

(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

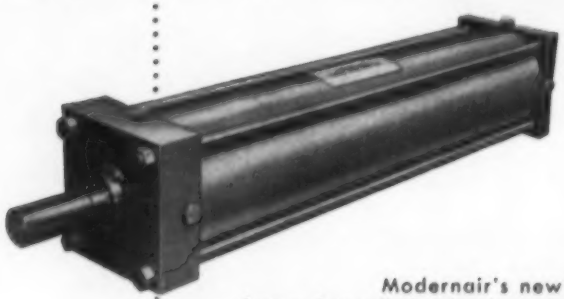
BLACK DIAMOND U.S.A.

NICHOLSON FILES *A FILE FOR EVERY PURPOSE*

NEW

Modernair

HEAVY DUTY CYLINDERS



Modernair's new line of heavy-duty cylinders has been developed to meet the need for a rugged, reliable, long-lived cylinder under heavy mill-type service conditions.

They are offered in two types: the series HA for air service up to 200 psi; the series HH for hydraulic service up to 1000 psi. Both types are available in 3¼", 4", 5" and 6" bore sizes, stroke length optional.

CONSTRUCTION FEATURES

Rolled steel cylinder heads

•

Extra-heavy tie rod construction

•

Heat-treated, chrome-plated piston rod resists wear and corrosion

•

Self-adjusting, wear-compensating "Uneepac" seals on rod packing

Cartridge-type rod packing and gland seal assembly for easy servicing

•

High tensile aluminum alloy piston head, specially treated for corrosion and wear resistance

•

Needle-valve cushion adjustment – floating high durometer Hycar "O" ring type cushions on HA cylinders, tapered cushion bosses on HH cylinders

Modernair "ruggedized" cylinders and control valves can cut your maintenance expenses and downtime losses to the bone. Why not get the facts now? Write for catalog, specifications and prices . . . please address Dept._____.

Modernair CORPORATION

400 PREDA STREET Dept. K1
SAN LEANDRO, CALIFORNIA

28

MEMBER OF NATIONAL FLUID POWER ASSOCIATION

Blockboard Plant Scheduled for Canada

• Signing of an agreement with a California group for construction this year of a $2,000,000 blockboard plant at Sturgis in northeastern Saskatchewan, Canada, was announced recently. The new forest industry, Assiniboine Blockboard Co., Ltd., is sponsored by Elmer P. Jacobson and Associates of Encino, California.

The plant's chief product will be a customcut blockboard, a product used by the woodworking trades in the manufacture of furniture, shelving, cabinets, panelling, etc. It will be manufactured with a core of thin poplar strips faced and backed with poplar veneer, with thickness of the core ranging from five-eighths to one and a half inches.

The new blockboard factory will be built on a 60-acre site at Sturgis, with the main plant building to be 160 by 350 feet, and of single story construction. Auxiliary facilities will include sawmill, powerhouse, dry kilns and log warming vats. The building schedule calls for the plant to be under construction by October 1, 1957, and in operation by October 1, 1958.

Plant capacity the first year will be 6,000,000 square feet of blockboard, increasing to 12,000,000 square feet at the end of two years. By that time, the operation will provide employment for between 60 and 70 people, with an annual payroll of approximately $250,000. A continuing expansion program will see production increased still more substantially in the third year.

Hauling and timber cutting during the winter months will create work for possibly an additional 400 men, with a second payroll of close to $200,000. Cutting and hauling will likely be contract work.

Principal market for the new industry will be in the United States.

The blockboard company has concluded an agreement with the Saskatchewan natural resources department to obtain its timber requirements from the Porcupine Forest Reserve, 20 miles north of Sturgis. This company chose the Saskatchewan location because of the excellent supply of poplar available.

Concern Leases Plant

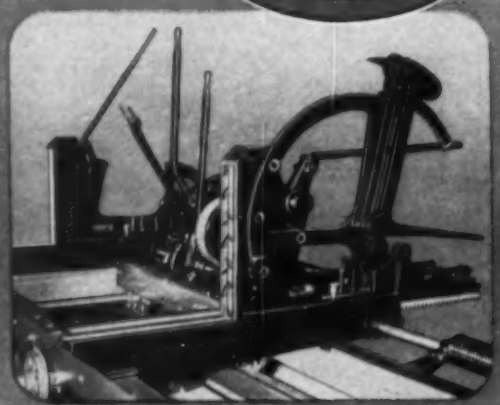
• Conifer Wood Products at Murphy, Ore., has been leased to a new firm, Southern Oregon Timber, and reopened in February.

Joe M. Crahane of Independence, Ore., president of Conifer, said the new operators will retain the present office force headed by George Jack as office manager, and would continue to process heavy timbers. New operators are Vernon McCoy, Tigard, who will be plant manager; Hubert E. Stewart, Brookings; Leslie W. Sturgis, Eugene; Leonard A. Klees, Estacada, and Jess Dale Hodson, Grants Pass.

You'll profit most with

TRADE FRICK MARK

Sawmill Equipment



Boss dog headblocks are furnished with built-in taper adjustment, hammer dog, or standard taper attachment and drop dog.

In this day of faster saw speeds, more powerful engines, and greater accuracy, you can get the highest production only with the latest improved equipment.

Frick sawmills outsell all others because they give you unequaled savings in time, labor, power and money.

See for yourself what these superior Frick features mean: get catalogs from your nearest Branch or Dealer today, or write

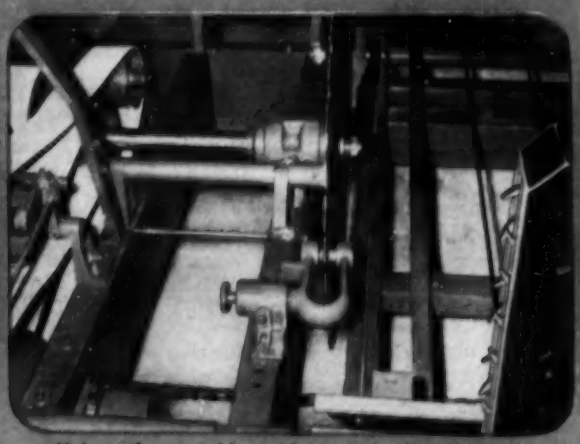
FARM & SAWMILL MACHINERY SINCE 1853

FRICK CO.

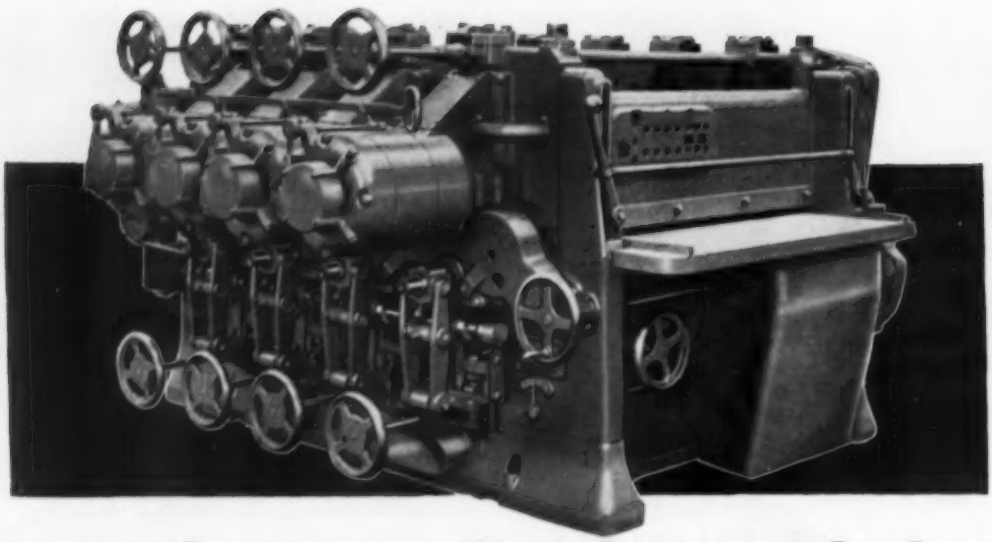
WAYNESBORO, PENNSYLVANIA, U.S.A.

Branches at Richmond, Charleston, Knoxville, Salisbury, Columbia, Atlanta and Montgomery; Direct Factory Representatives in other areas.

New overhead sawdust drag features V-belt drive and ball-bearing sheaves; is lighter running.



Universal saw guide, with pivoted adjustable yoke.



Improved way to finish particle board

eliminates chip-tearout problems

Mills using Yates-American Double-Deck Sanders come up with performance figures that are eye-openers!

You must agree that we at Yates-American can be unbiased in discussing the merits of surfacers versus sanders in chip-core operations. After all, we make both types of machines.

We feel that Yates-American surfacers are the finest. But — it is our honest opinion that *any* surfacer has *limitations*, when it comes to finishing particle board.

We estimate that about 60% of the end-use requirements for particle board call for a smooth finish you can get only from a *sander* — the Yates-American Double-Deck, in particular. Leading mills throughout the country back us up on that!

Does the Entire Job!

With the Yates Sander, finishing particle board is done in *one* operation:

It removes up to 3/16" of stock (depending upon density of board) —at rates up to 50 feet per minute. It holds tolerances of less than ±.002" over an entire sheet — *that we guarantee!*

There are no expensive carbide knives to joint, regrind, and reset. *No knife marks or chip tearout.*

Preferred by Leaders!

Leading companies like these have already purchased Yates-American Double-Deck Sanders:

American Parboard Corp.
Black Mountain, N. C.

Carolina Forest Products, Inc.
Wilmington, North Carolina

Columbia Hardbord Co.
Everett, Washington

Curtis Companies, Inc.
Clinton, Iowa

Elmon Gray Co.
Waverley, Virginia

Granite Board, Inc.
Goffstown, New Hampshire

Rock Island Millwork Co.
Rock Island, Illinois

Wabash Screen Door Co.
Minneapolis, Minnesota

Weyerhaeuser Timber Co.
North Bend, Oregon

Wynnewood Products Co.
Jacksonville, Texas

Don't you think a Yates Double-Deck Sander should figure in *your* particle board plans? Ask your nearby Yates-American man to make recommendations. Or write, wire, or phone us today at Beloit.

Yates-American
BELOIT, WISCONSIN

Branch Offices: Chicago, Illinois
High Point, North Carolina
Memphis, Tennessee
Portland, Oregon

First with the *Finest* in woodworking machinery. Established in 1883

MATCHERS • MOULDERS • SURFACERS • RIPSAWS • RESAWS • SANDERS

WW-9

How's this for SANDPAPER LIFE!

Here are some figures that are hard to believe — we blinked once or twice ourselves, when we first saw them. But they're fact — actual performance figures supplied to us by two reputable companies, names you'd recognize at once.

Both mills are finishing particle board with a Yates-American Double-Deck Sander and are removing up to 3/16" of stock. This is what they report on sandpaper life:

First two pairs of drums	1200 to 1500 hours
Third pair of drums	500 to 700 hours
Fourth pair of drums	150 to 200 hours

We repeat — these are not *our* figures. They've been furnished to us by *two different mills* and have been confirmed and re-confirmed.

The Universal 'Jeep'. The rugged 'Jeep'* is ideal for cruising forest tracts or for contact work between office, mill and woods. With the extra traction of its 4-wheel drive, it goes almost anywhere, on the road or off, in good weather or bad. Its short turning radius and low silhouette make it ideal for maneuvering under tree limbs in wooded areas.

How 'Jeep' all wheel traction speeds tough lumbering operations!

The completely New Forward Control 'Jeep' FC-150 Truck. It's the first time a 4-wheel drive truck has so effectively combined so much cargo capacity (74 inch pickup box), with such exceptional "go-anywhere" maneuverability (81 inch wheelbase).

The 'Jeep' Station Wagon. This spacious 4-wheel drive utility wagon transports supervisors, crews and equipment for surveying, fire patrol or timber marking. It carries six passengers, or up to 110 cubic feet of bulky equipment, on the road or off.

Vehicles in the 'Jeep' family are made to order for tough lumbering operations... they are the only 4-wheel drive vehicles in their weight class engineered completely for 4-wheel drive off-the-road use.

In the heavy rough going of lumbering projects, the extra traction of their 4-wheel drive takes men and equipment through mud, snow, soft earth, up steep grades or over pioneer roads—in good weather or bad. 'Jeep' vehicles go where ordinary vehicles can't. In timber scouting, patrol work, tree seeding, road building or general conservation, rugged 'Jeep' vehicles earn their keep every day of the year. On the highway, they travel at top legal speeds in conventional 2-wheel drive.

On the road or off, they haul heavily loaded trailers. And with power take-off or hydraulic lift, they operate many types of special equipment, from winches to fire-lane plows. Let your Willys dealer show you how versatile 4-wheel drive 'Jeep' family vehicles can work and save for you. Ask him for an on-the-job demonstration.

The 'Jeep'®

family of 4-Wheel-Drive vehicles

WILLYS... makers of time-tested utility vehicles

**Model CJ-5 shown*

WILLYS MOTORS, INC., TOLEDO 1, OHIO

14/24
All over America... this crayon means
Vivid Permanent Markings
that remain clearly visible!
RED LUMBER CRAYON: DIXON No 520

MARKS LUMBER, STEEL, IRON, CONCRETE . . .

Write for FREE SAMPLE! Specify the surface to be marked.

Sold everywhere - in Mill Supply Houses, Hardware Supply Firms, Industrial Supply Distributors and Engineering Supply Firms. Be Sure To Specify:

DIXON
LUMBER CRAYONS!
In Red, Yellow, Blue

THE JOSEPH DIXON CRUCIBLE COMPANY
PENCIL SALES DIVISION—DEPT. L —11
Wayne & Monmouth Streets
Jersey City 3, New Jersey

NHA Discusses Grade Marking

YOU MAY WIN the argument but you'll probably lose a customer. That's what can happen when a shipper and a lumber dealer lock horns over hardwood lumber shipments.

Possible wrangles can be eliminated or diminished if the buyer first will notify the shipper upon arrival of a sub-par shipment. Then when a detailed report is made at a later date, the shipper will not be immediately put on the defensive.

Where re-inspection of lumber is called for, expense of bringing in a qualified inspector may well cost $500, paid by the "loser". The "winner" usually has made his last sale to that customer.

Since most complaints from lumber purchasers are on grade, it would be an advantage to grade mark all lumber. It would save argument in trying to arrive at an adjustment.

This advice grew out of a panel discussion on wholesaling of Pacific coast hardwoods at the Northwest Hardwood Association meeting in Seattle, Wash., January 19.

THE ANSWER TO the question, "How can you handle No. 3 lumber without losing money?" lies in the millman adequately instructing the loggers as to the log grade requirements of that mill. The loggers will then deliver a higher percentage of material on or close to grade.

Unit handling at mill and destination is another cost-cutter for hardwood shippers.

HOW TO SEASON hardwood lumber more efficiently and economically was the subject of a clinic on kiln drying. Jack Pfeiffer, Oregon Forest Products Laboratory, moderated. Other partciipants were Harvey Oster and Ed Johnson, C. M. Lovsted & Co.; Hamlet Steele and George Hicks, Bellevue (Wash.) Dry Kilns, Inc.; Archie Knauss, Forest Utilization Service; Prof. Robert Wellwood, Univ. of British Columbia; Carl Cole, Cleaver-Brooks Co.; and Paul Barber, Oregon-Alder-Maple Co.

Mr. Knauss pointed out that the most effective drying schedules will help to retain as many desirable qualities of the green lumber as possible. He said that shrinkage of flat grain in red alder is seven per cent and in the vertical grain, four per cent, when dried. Alder has a greater tendency to cup compared with other species. Mr. Knauss stated that most hardwood users require lumber with a moisture content of under ten per cent. He suggested drying alder at a kiln temperature and relative humidity which will result in a minimum amount of surface checking, thus reducing degrade later on.

TOO "HOT" LUMBER should not be machined, the panel felt, because the surface cools too quickly and the boards will split in the planer. Also, raised grain will result. If the lumber is cooled in the kiln, following drying, the moisture content will remain more constant throughout the board. Humidification of lumber was suggested as an aid to conditioning.

Storing of kiln-dried lumber in unheated buildings is not recommended, because the boards will absorb moisture eventually just as it would if stacked outside. Even a slight temperature increase of 10° F over outside temperature will keep the equilibrium moisture content down.

Hamlet Steele said his practice at Bellevue Dry Kilns, in the case of no covered storage facility and where the lumber is not to be planed in the near future, is to unsticker the piles and make a solid package.

OUTSIDE PIECES in a load of kiln dried lumber will warp out of shape if they are not properly conditioned, reported Paul Barber of Oregon-Alder-Maple. At his mill at Willamina, Ore., lumber is conditioned for 12 hours at the end of the run. He said that green alder before drying has a m. c. of from 90 to 120 per cent.

Stickering, said Mr. Barber, is an important element in alder drying. At Willamina, they insert the stickers as straight as possible with 1x2's in the middle and 1x3's or 1x4's in the ends. Use of wider stickers at ends helps prevent checking. On an eight-foot 4/4 board they would use seven stickers.

Another factor brought out was that double-end trimming also is useful in reducing end checking.

Publications Announced

The next quarterly meeting will be April 6 in Corvallis, Ore.

Three new hardwood publications were announced. One is the association's forest management committee's report on management of hardwood, which will be published soon. Pacific Northwest Forest & Range Experiment Station, Portland, Ore., is compiling a handbook on northwest hardwoods, as well as a report, "Management and Utilization of Red Alder." Information contained in these three offerings will be important tools for hardwood land owners, hardwood producers and hardwood consumers.

The association's new products research and deevlopment committee, Jack Pfieffer, Oregon Forest Products Lab., chairman, is tackling problems of direct concern to hardwood producers: (1) better utilization of low grade logs, (2) getting more diversified markets and (3) market survey of hardwood users in the west.

(See Plywood Dept. in this issue for coverage of an important report on hardwood plywood.)

Only $250 for repairs in 2½ years!

ON EUCLID LOG HAULER

• A single Euclid TD Log Hauler has hauled over 20 million board feet in 2½ years. Maintenance expense for the "Euc" has totaled $1750—$1500 for tire recapping and $250 for mechanical service.

With this Euclid, T. Enemark Logging Co., Ltd. has saved in many other ways too. Travel time on a 7-mile haul was reduced 25%. The single axle hauler also reduced tire costs and haul road maintenance. Roads stay in better condition and require less maintenance with single axle haulers than with tandem axle trucks.

Except for down grades over 16%, speed of the loaded "Euc" is controlled by the Torqmatic Brake without need for service brakes. Result is greater safety and substantial savings in brake relining costs.

Euclid log haulers are designed for cost-cutting performance on all kinds of logging operations. Built specifically for tough off-highway service, the Model TD "Euc" for use with 12 ft. to 14 ft. bunks has a 300 h.p. engine . . . Torqmatic Drive with NoSpin differential . . . 18.00 x 25 drive tires . . . hydraulic booster steering. Model R-15 for 10 ft. to 12 ft. bunks is powered by a 230 h.p. diesel and has 16.00 x 25 tires.

For lower operation and maintenance costs, see your Euclid Dealer . . . he has facts and figures on Log Haulers and other Euclid models that show why ***Euclids are your best investment.***

•

EUCLID DIVISION GENERAL MOTORS CORPORATION, Cleveland 17, Ohio

Euclid Equipment

FOR LOGGING, CONSTRUCTION AND MINING

HD-21 This HD-21 is building 20 miles of timber access roads in Oregon. Torque converter drive automatically puts maximum push against the load at all times. The special strength and protection of exclusive Allis-Chalmers all-steel Box-A Main Frame that soaks up shock is particularly valuable in this tough work.

Allis-Chalmers Advanced Design Today's Biggest Equipment Value

When you put Allis-Chalmers crawler tractors, graders and other logging equipment to work on your show, you get plus values in low operating costs, big work capacity and extra logging output.

You get this kind of performance because of Allis-Chalmers advanced basic design. It provides more working power, more strength in all components, more working weight where it's needed. Years ahead in design, Allis-Chalmers tractors are dollars ahead in over-all performance.

In every phase of logging—building and maintaining roads, skidding and yarding, loading and decking logs, clearing landings and working at the mill—Allis-Chalmers' outstanding features increase output per man-hour, step up over-all production. It pays to log across the board with Allis-Chalmers.

HD-11G with fork or tongs The HD-11G, equipped with lift fork or lift tongs and winch, solves knotty problems in economically salvaging wind-blown and down timber. Here, with lift fork, it is working on a large fir logging operation in northern California.

Extra-long tracks, plus superior over-all tractor balance, provide real stability and control. Another important design feature of all Allis-Chalmers crawler tractors is unit construction—engine, clutch, transmission, steering clutches and final drives can each be removed independently for easy accessibility in servicing.

HD-16 Allis-Chalmers tracks are designed specifically to withstand such rough going as this HD-16 is taking in stride, skidding out a big log with logging arch. True Dimension tracks assure both maximum resistance to wear and strength against shock. The HD-16, like all Allis-Chalmers crawler tractors, has Positive Seal truck wheels, idlers and support rollers that require lubrication only once every 1,000 hours; other important lubrication advantages turn service time into extra work time.

Do your jobs better and at lower cost with Allis-Chalmers. Your dealer will show you how these advanced-design tractors give you your full money's worth.

ALLIS-CHALMERS, CONSTRUCTION MACHINERY DIVISION, MILWAUKEE 1, WISCONSIN

ROLL-AWAY is an Allis-Chalmers trademark.

ALLIS-CHALMERS

HD-6G One of the most versatile units in the Allis-Chalmers line is the HD-6G tractor shovel. It clears out landings; builds and maintains roads; loads earth, rock, sand and gravel with 1½-cu-yd bucket. Tractor shovels are available also in the three larger tractor sizes. Straddle-mounted final drives on all Allis-Chalmers tractors, supporting final drive shafts on both ends with tapered roller bearings, increase gear life . . . double-reduction final drives provide greater ground clearance.

The FORTY FIVE In addition to the important work of building and maintaining haul roads, the Forty Five motor grader performs many other tasks in the woods or at the mill, such as grading camp sites, clearing fire lanes and plowing snow from roads. Advanced-design features include ROLL-AWAY moldboard that handles bigger loads by rolling the earth instead of pushing it . . . tandem drive which, with powerful 120-brake-hp diesel engine, produces more power at the wheels . . . tubular frame . . . complete power control through toggle-type levers.

You set the date . . .

We demonstrate

It's easy to prove to *yourself* that Diehl precision woodworking machines give you *high quality, low cost* production. Just make a date—at *your* convenience—with your nearby Exclusive Diehl Representative. He'll gladly arrange for a demonstration of any Diehl machine at a plant in your locality.

A Diehl machine you'll find in nearly every major production plant is the No. 750 Straight-Line Rip Saw. It is unsurpassed for high-speed, *tough* sawing and for precision accuracy in cutting straight-line glue joints. Its outstanding features make it *the standard of comparison in heavy-duty rip sawing.*

Features include heavily ribbed welded-steel base, heavy-duty pressure bar arms, completely sealed pressure roll bearings, solenoid lubrication to chain and race, and easy removal of sawdust.

The No. 750 is available in right or left hand models, and offers speeds up to 250 fpm and handles stock from ⅛″ to 4¼″ thick and as short as 7″. Table width is 25″ to right of blade and 37″ to the left.

This is only one example of the complete line of woodworking equipment offered by Diehl. Other machines include the Nos. 99, 990 and 909 Multi-Rip Saws, No. 725 Automatic Cut-Off Saw, No. 890 Tapeless Veneer Splicer, No. 69 Veneer Jointer and Edge Gluer, No. 660 Lumber Jointer and Edge Moulder and 4″-6″-8″ and 12″ Moulders.

Find out for yourself how Diehl machines can increase your production . . . increase your profits! *You* set the date . . . *We* demonstrate!

The G. M. Diehl Machine Works, Inc. • Wabash, Ind.

Standard of comparison in the woodworking industry...

WEST COAST EXCLUSIVE DIEHL REPRESENTATIVES

Frank E. Jones Machinery Corporation, Los Angeles 21, California
Pacific Woodworking Machinery Company, Berkeley 10, California
Tyee Machinery Company, Seattle 4, Washington

Diehl

How Horseshoe Logging Company's

..1 investment streamlines operation 4 ways,

salvage-logging near Canby, Ore.

1

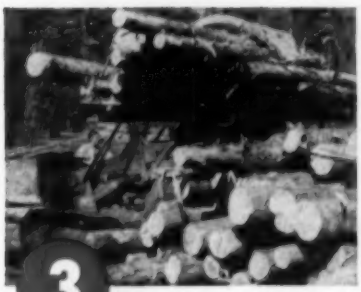
Stacks lumber

"Horseshoe's" International Drott TD-9 combination log-and-lumber Skid-Grapple picks up a big package of lumber—and holds it securely—between top holding arm and square, flat bed. Third valve (standard equipment) provides separate, positive top grab-arm control—for balanced loading, neat stacking!

2

Feeds mill

In addition to its many other duties, "Horseshoe's" TD-9 Skid-Grapple keeps a constant log supply on the platform to keep the mill busy. Conversion of grapple from lumber to log handling is only a matter of minutes!



3

Stockpiles logs

Another step on this sawmill operation at Canby, Oregon, shows how the one-man-operated, fast-moving TD-9 Skid-Grapple handles the whole show. Here, the versatile rig sorts and stockpiles logs handy to the mill!

4

Removes mill waste

Slabs and edgings are removed speedily and easily with the combination Skid-Grapple. With bucket, this rig also removes sawdust to a fire-safe area. "Horseshoe" chose the combination Skid-Grapple for the variety of work it does!

Always busy! "This machine is never idle!" say Jack Grief and Tim O'Connor, "Horseshoe" owners. "It's the biggest improvement made in our operation since we started logging." International Drott Skid-Grapples come in a variety of shapes and sizes for handling logs, pulpwood, lumber, and clearing land. All have the exclusive performance-protection of shock-swallowing Hydro-Spring. See your International Drott distributor for a demonstration!

International Harvester Company, Chicago 1, Illinois
Drott Manufacturing Corp., Milwaukee 15, Wisconsin

INTERNATIONAL® DROTT®

J. H. Baxter & Co., with treating plants at Seattle, Wash., The Dalles and Eugene, Ore., Alameda and Long Beach, Calif., recently held a week long production meeting at Eugene, Ore. This annual get-together of the Production Department discusses production and timber problems in various sections up and down the Pacific Coast. The Production Department supplies treating plants with Douglas fir poles and piles. The meeting was conducted by Mr. W. O. Spies, Manager, Production Department, with Mr. C. A. Chadbourne, pres., J. H. Baxter & Co., present. Left to right: Ray Hytinen, Larry Spencer, Ray Gleim, Clinton Wynn, Allen Goold, Clarence Salkeld, Bill Smith, Danny Leland, Darrell Palmer, Ray Voorhies, Mr. Chadbourne, Milton Dement, Harvey Alley, Mr. Spies, Ursel Waterman, C. R. Ballew, Jack Morrow, Hugh McClure, Jack Beager, Dale Fallon and Dick Sund.

BLUEJET CHAIN

SOLVES YOUR CUTTING PROBLEMS

BlueJet Chain is precision built from high quality steel. Its smooth performance and toughness mean less sharpening, less breakage. BlueJet cuts better. This means less power loss, less engine wear, longer saw life. There is a BlueJet Chain for every saw, every type of cutting. Get trouble-free, fast performance with BlueJet.

Chain Breakage? Get BlueJet—tougher, lasts longer.

Chain Dull? Get BlueJet—stays sharp longer.

Chain Sloppy? Get BlueJet—less stretch, smoother cutting.

Get BlueJet: See your courteous, competent BlueJet dealer now.

GUIDE LINK — Reamed, precision fitted rivet holes eliminate stretch, give longer service with less wear.

ROUTER — Precision ground, chrome plated high grade steel means longer life, less sharpening.

SIDE LINK — Shaped for proper sprocket fit with ample riding area to reduce bar wear, give smoother cutting.

RIVET — Large head, hardened bearing surface, precision tolerances maintain chain tightness, assure long chain life.

BlueJet Chain Co. • 2704 Fourth Avenue So., Seattle 4, Wash. PP-1

Please send me literature on BlueJet Chains.

Name_____

Address_____

City_____

Remember — There's a BlueJet Chain For Every Saw

MacMillan & Bloedel Reports on 1956

• British Columbia's giant forest industry company, MacMillan & Bloedel, earned $18,685,615 during the year ended September 30, 1956, after paying $1,683,514 for depletion of timber, $5,882,628 for depreciation and $19,018,899 for taxes and royalties. A total of $5,265,470 was distributed as dividends.

Sales of lumber, plywood, pulp, doors and shingles and miscellaneous income totaled $176,723,754 last year, virtually the same as in 1955. Costs were about $2,000,000 higher. Production of logs was down from 600,000,000 feet to 531,000,000 feet and lumber production was down from 580,000,000 feet to 527,000,000 feet. Plywood was up, however, from 233,000,000 square feet ⅜ basis to 277,000,000. Production of pulp and doors was higher.

Summarizing the market trend, the annual report states that prices in Canada and the U. S. were steady and the demand good until the last quarter of the financial year when increasing weakness developed without any sign to date of an upward tendency. Credit restrictions discouraged new construction. The report also mentions decreasing sales to the United Kingdom, higher freight rates and other adverse factors.

"Prospects of any revival of the United Kingdom market for B. C. lumber in the near future are not encouraging," the report states, "although doubtless this market will continue to be an outlet for specialty items such as railroad ties and timbers. Rising water freights have slowed down shipments to the Atlantic coast and to other export markets. U. S. Pacific coast mills, due to lower intercoastal rates, have a marked advantage."

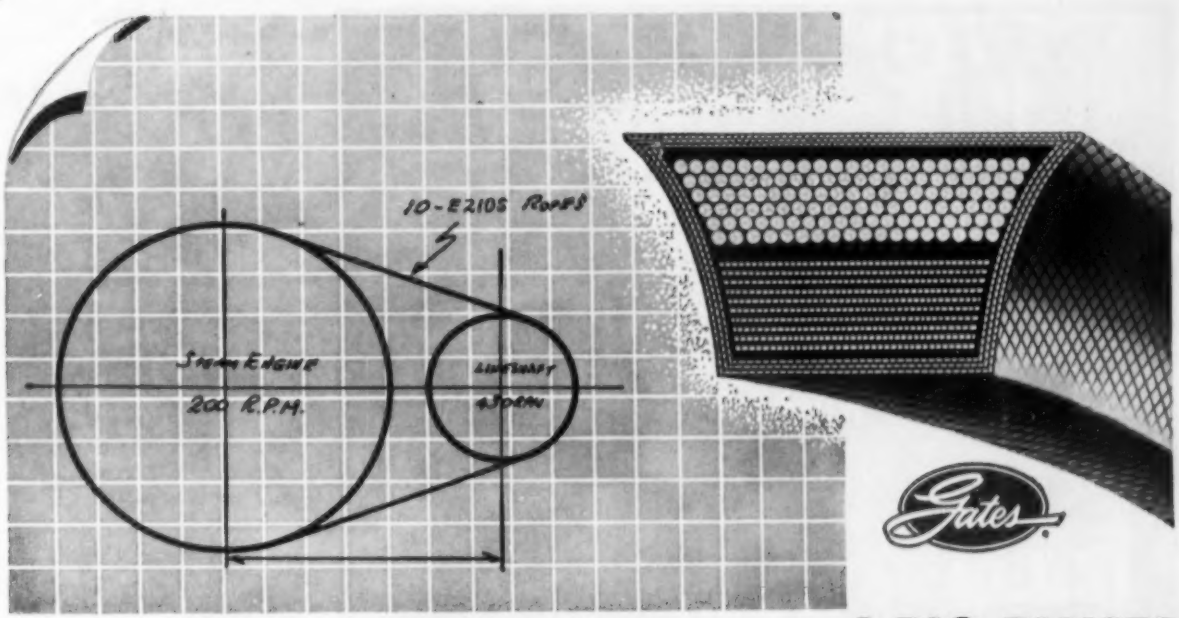
The report, signed by Mr. Hoffmeister and President H. S. Berryman, adds:

"An interesting and significant factor is that through the high overseas freight rates and credit restrictions abroad, the U. S. is becoming increasingly important to the company as a market for its production of lumber, pulp and newsprint. The discount on the U. S. dollar, which is due to factors other than ordinary trade, costs the company a great deal."

HPI Brochure Issued

• The Hardwood Plywood Institute, Chicago, Illinois, has published a new four-page brochure which tells how to increase the living area and dollar value of a small home by the use of hardwood plywoods.

Intended as an idea-stimulater for both homeowners and builders and as a hardwood merchandiser for dealers, the brochure is liberally illustrated and printed in two colors. It is entitled "How to Make a Small Home Larger."



MORE HP DELIVERED PER $ INVESTED

On any new drive design—where you have limited space or you need to keep weight down—here is an important fact that can save you money:

A Gates Super Vulco Rope drive will deliver more horsepower per dollar invested than any standard V-belt drive.

Actually, the greater load carrying capacity of Super Vulco Ropes cuts down the number of belts required (5 Super Ropes do the work of 7 standard belts) . . . thus reducing the width of sheaves.

Sheaves with fewer grooves not only cost less, they weigh less, and take up less room—advantages that can easily improve the design and lower the overall cost.

A wealth of drive data is quickly available to you. Simply call your nearby Gates V-Belt Distributor (see 'phone book yellow pages) for a Gates V-Belt Specialist. Stocks available in industrial centers around the world. The Gates Rubber Co., Denver, Colorado—*World's Largest Maker of V-Belts.*

4 BIG PLUSES

✚ Handles shock loads

Super-strength cords provide 40% greater horsepower capacity . . . easily absorb heavy shock loads.

✚ Wears far longer

Concave Sidewalls (Fig. 1) increase belt life. As belt bends, concave sidewalls (U.S. Pat. No. 1813698) become straight, make uniform contact with sheave groove (Fig. 1-A). Uniform contact means less wear on sides of belt . . . longer V-belt life.

Flex-Weave cover (U. S. Pat. No. 2519590) provides greater flexibility with far less stress on fabric. Cover wears longer—increases belt life.

✚ Provides Static Safety

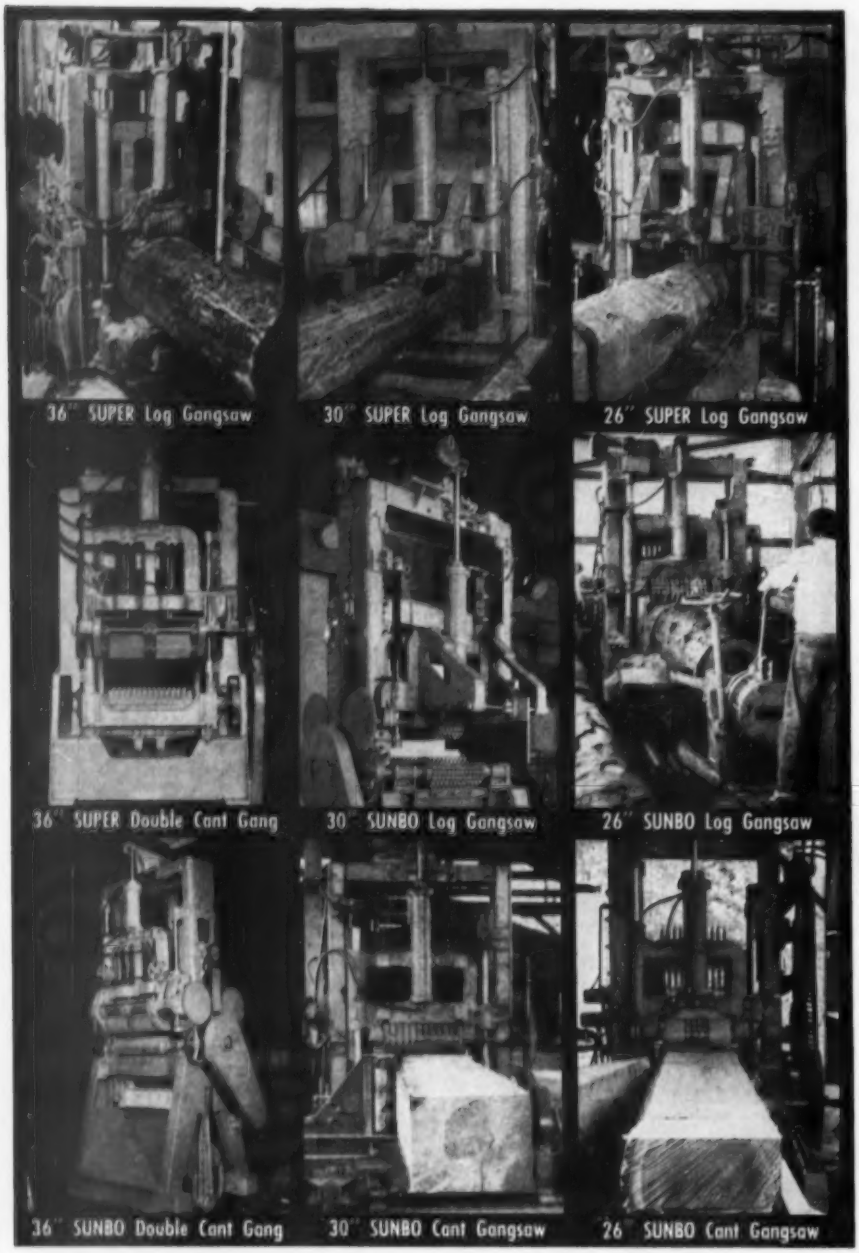
High electrical conductivity is built into Gates Super Vulco Ropes for safer drives (in explosive atmospheres).

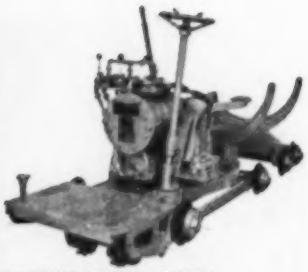
✚ Resists oil, heat and weather

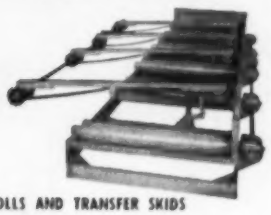
Special rubber compounds with which cords and fabric are impregnated make Super Vulco Ropes highly resistant to heat, oil and prolonged exposure.

TPA 76 B

Gates Super VULCO ROPE Drives


36" SUPER Log Gangsaw
30" SUPER Log Gangsaw
26" SUPER Log Gangsaw
36" SUPER Double Cant Gang
30" SUNBO Log Gangsaw
26" SUNBO Log Gangsaw
36" SUNBO Double Cant Gang
30" SUNBO Cant Gangsaw
26" SUNBO Cant Gangsaw


AIR-OPERATED INFEED CARRIAGE


ROLLS AND TRANSFER SKIDS

LOG KICKER

LOG STOP AND LOADER

CANT ROLLER CASE

AUTOMATIC LOG HAUL

Here is the Key to your Future!

When you invest in Mill Engineering gangsaw equipment you're buying a lifetime of cost saving, high profit production. Simple, rugged construction plus many exclusive patented design features enable the SUNBO or SUPER to out-produce under the most severe test of time and heavy use. Automatic overhang, too! Write or wire today for complete costs and production figures.

MILL ENGINEERING & SUPPLY CO.

3311 FIRST AVE. SO.
SEATTLE 4, WASHINGTON
Phone: SE 1034-1035

SALES REPRESENTATIVES — *California:* IDACO ENGINEERING CO., 3200 Peralta Street, Oakland 8, California; *Oregon:* CROWN MACHINERY & SUPPLY CO., 1805 N.W. Thurman, Portland 9, Oregon; *South and East:* WILCO MACHINE WORKS, 1301 North Hollywood Street, Memphis 8, Tennessee

at last...more "cookable" chips!

There's one sure way to get 'em with . . .

OK BATTLE AXE CHIPPER KNIVES.

They always deliver maximum production of uniform, cookable chips with an absolute minimum of costly splinters, slivers and dust.

"OK BATTLE AXE" Chipper Knives are made of special high alloy steel, hardened evenly in electrically-controlled furnaces, then carefully tempered, ground and honed. The result is a dependable, durable blade with an extra-keen edge that gives you long, economical runs between regrindings, while improving overall chip quality. "OK BATTLE AXE" knives stubbornly resist cracking or shelling, even under high impact loads.

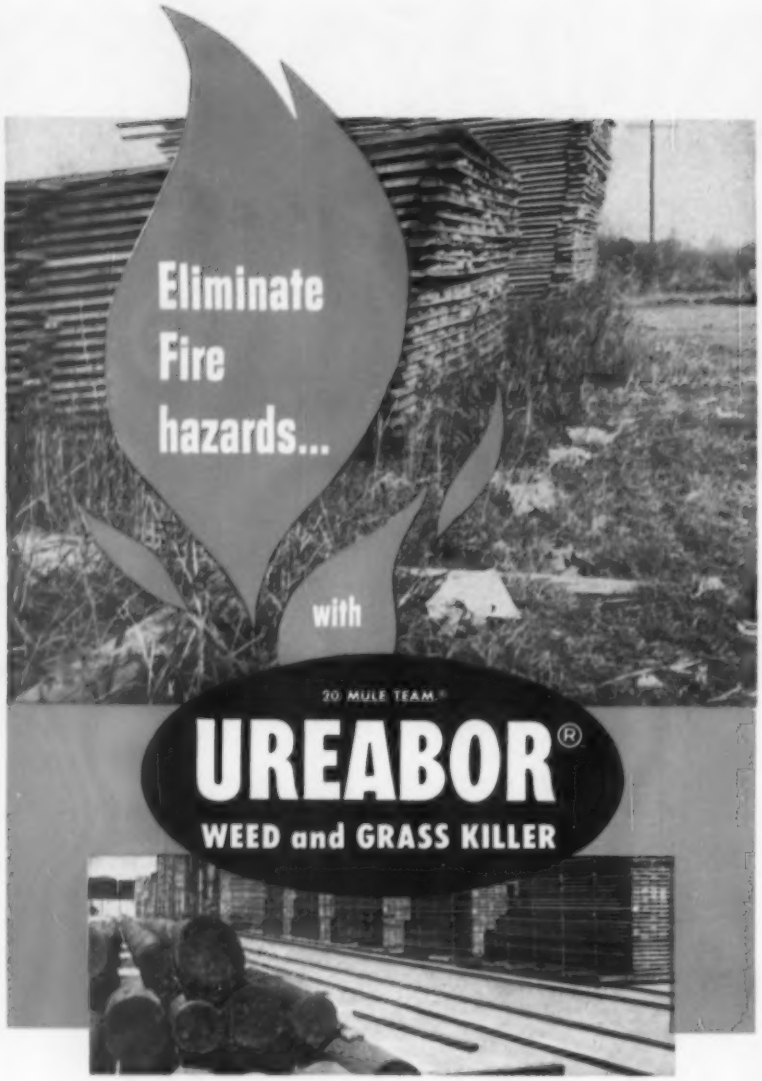
"OK BATTLE AXE" Chipper Knives are made to fit all paper mill and sawmill chippers. Many sizes stocked in Cincinnati, Ohio, and Portland, Oregon, . . . or order to your specifications. Complete records are kept to assure exact duplication of original orders without delay. Ohio Knife Co. field service men, experienced in chipping operations, can be sent to your mill to analyze your particular chipping problems and recommend correct tempers, bevels, etc. to best suit the job. No obligation, of course.

For complete information on "OK BATTLE AXE" Chipper Knives, write Dept. 52—R

THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

MANUFACTURERS OF OK HOG KNIVES, VENEER KNIVES, CHIPPER KNIVES, PLANER KNIVES.



UREABOR is your easiest way to destroy weed hazards safely and economically! You get full season control of both broadleaf weeds and grass from a single application. This dust-free granular weed killer is applied DRY—there is nothing to mix ...no water to haul. It is safe to use anywhere; is nonvolatile, nonflammable and noncorrosive to ferrous metals.

UREABOR is concentrated; it combines the plant-destroying action of sodium borates and substituted urea. Only 1 to 2 lbs. per 100 sq. ft. is required for effective control! This low rate is quickly and uniformly applied with a special spreader available for $10.75 delivered, anywhere in the U.S.A. The PCB Spreader is light-weight and sturdy—holds enough UREABOR to treat 2500 sq. ft. at the 1-lb. rate without refilling.

• ***Write today for Service Bulletin 15-W***

United States Borax & Chemical Corporation
PACIFIC COAST BORAX COMPANY DIVISION
630 SHATTO PLACE, LOS ANGELES 5, CALIFORNIA

Judd Greenman, Portland, Oregon, was reelected president of LIRC.

LIRC Speaker Discusses Russian Forestry

• Judd Greenman, retired manager of the Vernonia, Ore., branch of The Long-Bell Lumber Co., was re-elected president of the Lumbermen's Industrial Relations Committee at the annual membership meeting, in Seattle, Wash., Jan. 17.

Other re-elected officers who will serve during 1957 are Henry Dennis, assistant vice president of Scott Paper Co., Everett, Wash., vice president; S. L. Gregory, Pope & Talbot, Inc., Portland, Ore., treasurer; Henry E. Baldridge, Publishers Paper Co., Portland, assistant treasurer; and Walter Durham, Portland, secretary-manager.

Members of the executive committee for 1957 are Messrs. Baldridge, and Greenman (ex-officio); H. J. Greeley, Long-Bell, Longview, Wash.; G. M. Rhebeck, Rayonier, Inc., Hoquiam, Wash.; Wm. M. Black, Seattle Cedar Lbr. Mfg. Co., Seattle; and R. W. Middleton, Anderson & Middleton Lumber Co., Aberdeen, Wash.

Hector Stone, president, Hillcrest Lumber Company, Duncan, B. C., featured speaker, gave his observations of his tour of the Russian woods in 1956 as a guest of the Soviet government. Although there is not much mechanization among the operations visited, which utilize smaller trees than ours, Mr. Stone stated that "The long days of the northern summers permit two shifts per day, even in the woods; and in some logging camps as high as 75 percent of the employees are women."

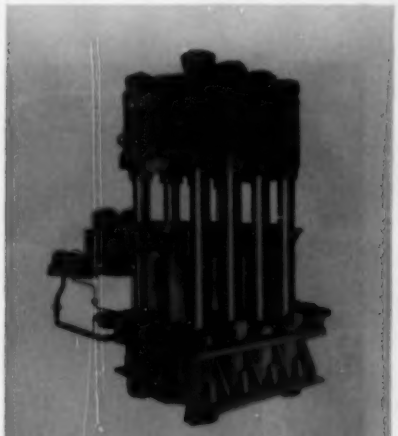
The Soviet ministry for timber employs 650,000 persons, including 2,000 boat operators. Almost all logging is done by narrow-guage railroad spurs into the vast Russian forests, with modern methods of water transportation from rail to mills. Employees are all unionized, and Mr. Stone reported that "Although the unions have practically nothing to say about wages, they do have a great deal of influence on working conditions. Safety education, however, lags far behind our west coast lumber and logging industries."

A NEW ROUND LOG Esterer gang mill was put into operation in December by Morrison-Jackson Lumber Co., Myers Flat, Calif. Capacity is 70,000 bd. ft. per eight-hour shift, employing 20 men. The original unit, entirely a planing mill, was caught in the 1955 flood, and had to be rebuilt. It resumed operation last March.

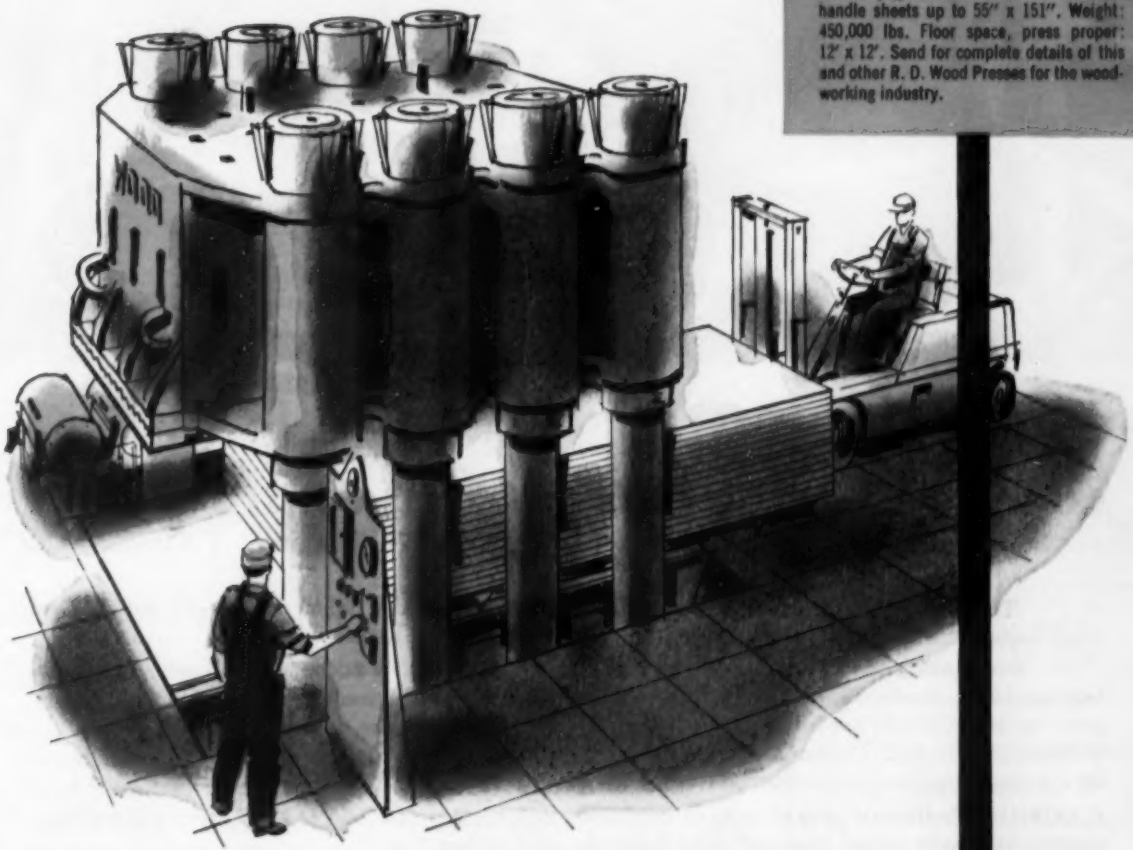
Engineered for Performance

Put a Wood Press to work and get the money-saving advantages of smooth, dependable performance . . . long operation with low maintenance.

Reason: every Wood Press is the product of sound design, carefully selected materials, conscientious craftsmanship. This is why Wood Presses are known throughout industry for their trouble-free operation and fast, economical production. R. D. Wood has many standard press designs for producing hardboard, composition building boards, veneer, plywood and pressed wood—and engineers others for special jobs. Write for our catalog and engineering information. No obligation, of course.



R. D. Wood Combination Press for asbestos flat board and corrugated asbestos board. Operation of this fast working, high production machine may be manual, semi-automatic or fully automatic. Entire unit is self-contained with motor-driven pumping system, valves and controls. Capacity: 6400 tons. Daylight: 3'-10". Stroke: 3'-10". Can handle sheets up to 55" x 151". Weight: 450,000 lbs. Floor space, press proper: 12' x 12'. Send for complete details of this and other R. D. Wood Presses for the wood-working industry.

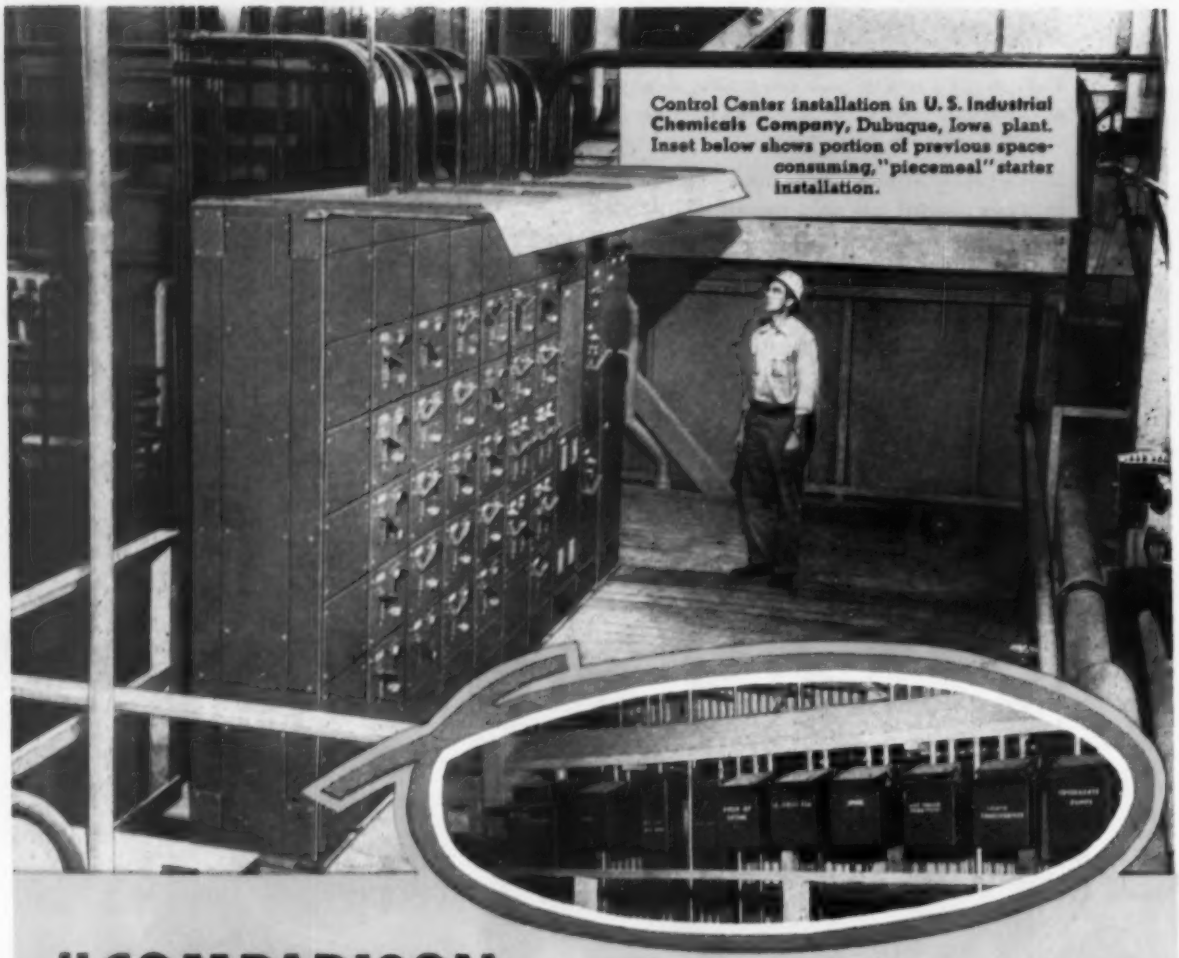


R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Representatives in Principal Cities

MAKERS OF HYDRAULIC PRESSES AND VALVES • FIRE HYDRANTS • CAST-IRON PIPE • GATE VALVES • GAS PRODUCERS • ACCUMULATORS



Control Center installation in U. S. Industrial Chemicals Company, Dubuque, Iowa plant. Inset below shows portion of previous space-consuming, "piecemeal" starter installation.

"COMPARISON convinced us that a SQUARE D Control Center offered us MORE!"

These design features make Square D your logical choice, too...

INCREASED SAFETY because bus bars are fully enclosed, rigidly supported and have ample cross section. Circuits are isolated by individually enclosed plug-in units. Disconnect handle designed for maximum operator protection.

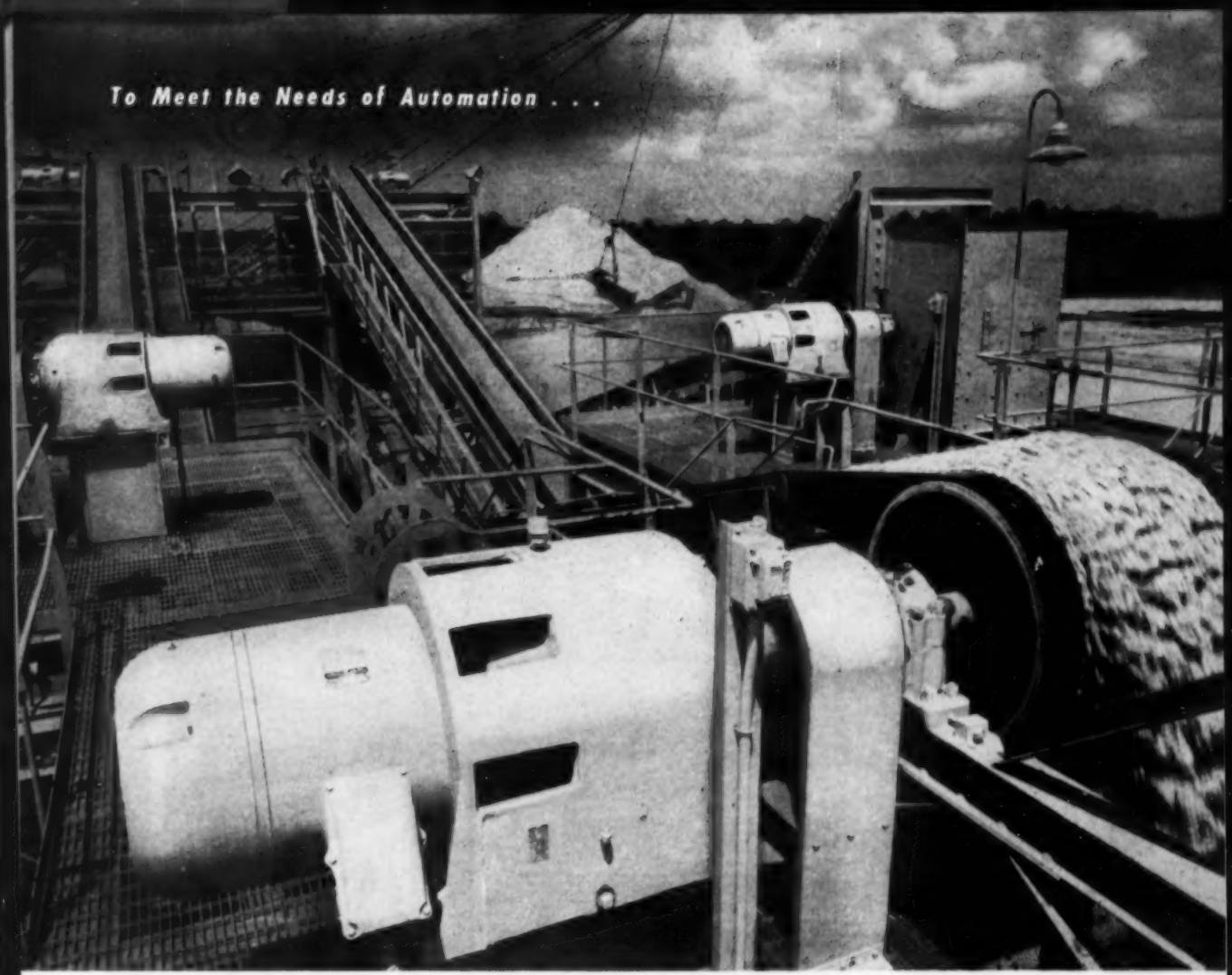
FLEXIBILITY. Individual plug-in units or complete sections are easily added, removed or exchanged. Pushbuttons, pilot lights, and selector switches are readily added to unit doors.

INSTALLATION ECONOMY. All wiring channels are large and accessible from front without removing units. No "wire fishing."

SPACE ECONOMY, TOO. Up to six combination starters fit in a 20" x 20" x 90" section. Plug-in unit heights designed in space-saving increments of 3 inches.

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE!

SQUARE D COMPANY



General Electric Gear-Motors Prove Reliability in Continuous Conveyor Operation

For increased productivity, reliable drives are important in maintaining a constant flow of materials through your plant. With General Electric gear-motors you can expect the same dependable service experienced by a large southeastern cement plant. There, G-E gear-motors driving the conveyor system, operate continuously. In five years these motors have required no maintenance other than infrequent oil changes.

In addition, General Electric gear-motors give you several other bonus features:

EASY INSTALLATION—Alignment is simple because unit is on a single base with gears properly lined up and locked in place at the factory before shipment.

LESS MAINTENANCE—Down time is reduced because gear-motors do not require the frequent inspection and replacement common with other methods of speed reduction.

QUIET OPERATION—Balanced distribution of the load throughout the unit means less noise.

MORE COMPACT—Packaged gear-motor design accomplishes speed reduction in a minimum of cubic feet, saves valuable space.

General Electric's new decentralized Gear Motor and Transmission Components Department is devoted solely to the design and manufacture of all types and sizes of gear-motors. For more information write for bulletin GEA-6027, Section 851-3, Schenectady, N. Y., or contact your G-E Apparatus Sales Office or nearest gear-motor supplier. *Gear Motor and Transmission Components Department, General Electric Co., Paterson N. J.*

WHERE GEAR-MOTORS CAN SAVE YOU MONEY*

**A partial list of many possible applications.*

CONVEYORS—belt, assembly, bucket, chain or screw.

FEEDERS—both belt and screw.

ELEVATORS—buckets under heavy or uniform load and centrifugal or gravity discharge.

AGITATORS, MIXERS AND SCREENS—for both liquids and solids.

CRANES AND HOISTS—heavy duty main hoists and skip hoists, for travel motion and trolley motion.

Progress Is Our Most Important Product

GENERAL ELECTRIC

In Mill Production

EVERYTHING MOVES ON MOLINE CHAINS

LOGS

LONG LINKS

CHAIN & FLIGHTS

LOG CHAINS

Moline Long Link Chains with flights and log chairs have been a standard in sawmill and lumber mill operation for 60 years.

LUMBER

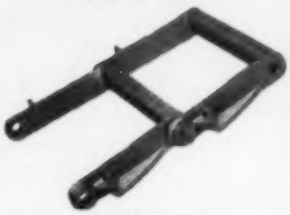
H-TYPE MILL CHAINS

TRANSFER CHAINS

ROLLER TOP SORTING TABLE CHAINS

Other time tested Moline Mill Chains include H-Type Chain for drives, conveyors . . . Transfer Chain for transfer table service . . . and Roller Top Chain for the lumber sorting table.

WASTE



REFUSE CHAINS

PANGBORN FLIGHTS

For conveying sawdust, pulp and waste wood, Moline Refuse Chain is highly efficient. Pangborn Flights, too, with "keyed" loops which lock into Moline Long Link Chains, have many advantages for this service.

Moline MALLEABLE Chains

MOLINE MALLEABLE IRON CO.
ST. CHARLES, ILLINOIS

60 YEARS IN LUMBER SERVICE

Licensed Manufacturers of Promal Chain

FOR SALES AND SERVICE, CALL . . .

J. W. Minder Chain & Gear Co.,
Los Angeles 1, California
6011 So. Central Ave., ADams 3-7221

CALIFORNIA—		
	SAN FRANCISCO	**Charles A. Fowler Co., 979 Bryant St.**
OREGON—	PORTLAND	**J. W. Minder Chain & Gear Co., 307 S.E. Hawthorne Blvd., Phone EMpire 1131**
	LA GRANDE	Industrial Machinery & Supply Co., Box 773, Phone 10071
	NORTH BEND	Industrial Steel & Supply Co., Phone 53821
	ASTORIA	Fisher Bros. Company, Phone 2750
	GRANTS PASS	Pacific Logging & Mill Supply Co., Box 323, Phone 4071
	EUGENE	Electric Steel Foundry Co., Phone 4-6171
	PORTLAND	Electric Steel Foundry Co., AT 2141
	MEDFORD	Electric Steel Foundry Co., Phone 2-2281
WASHINGTON—	TACOMA	Reel Machinery Co., 2324 E. 11th St., Phone: FUlton 1616 • FUlton 2593
	SEATTLE	**Chain Gear Inc., 822 First Ave. So., MAin 7000**
	LONGVIEW	Longview Equipment Co., 1005 15th Ave., Phone 5605
	SEATTLE	Electric Steel Foundry Co., Phone EL 4161
	SPOKANE	Electric Steel Foundry Co., Phone FA 4507

Canadian Distributor: **Western Equipment Ltd.**
102 Main St., Vancouver B.C., Phone TAtlow 2331
2003 Government St., Victoria, B.C., Phone GArden 1413

THERE'S AN **INSLEY** WORKING NEAR YOU

Insley Log Loader owned by Hegewald Timber Co., Stevenson, Washington

the INSLEY log loader

The Insley Log Loader has the mobility needed for "spot-loading" and clean-up work. It is adaptable to all types of logging booms and to a full range of attachments for off-season work. Insley Log Loaders can be supplied with gasoline or diesel power and equipped with a fluid coupling or torque converter. Available with self-propelled Maxi carrier, lorry (truck) or crawler mounting.

Let your Insley distributor show you an Insley at work, or, for further information, write:

INSLEY MANUFACTURING CORPORATION · INDIANAPOLIS, INDIANA

wholly owned subsidiary | **THE MAXI CORPORATION · LOS ANGELES**

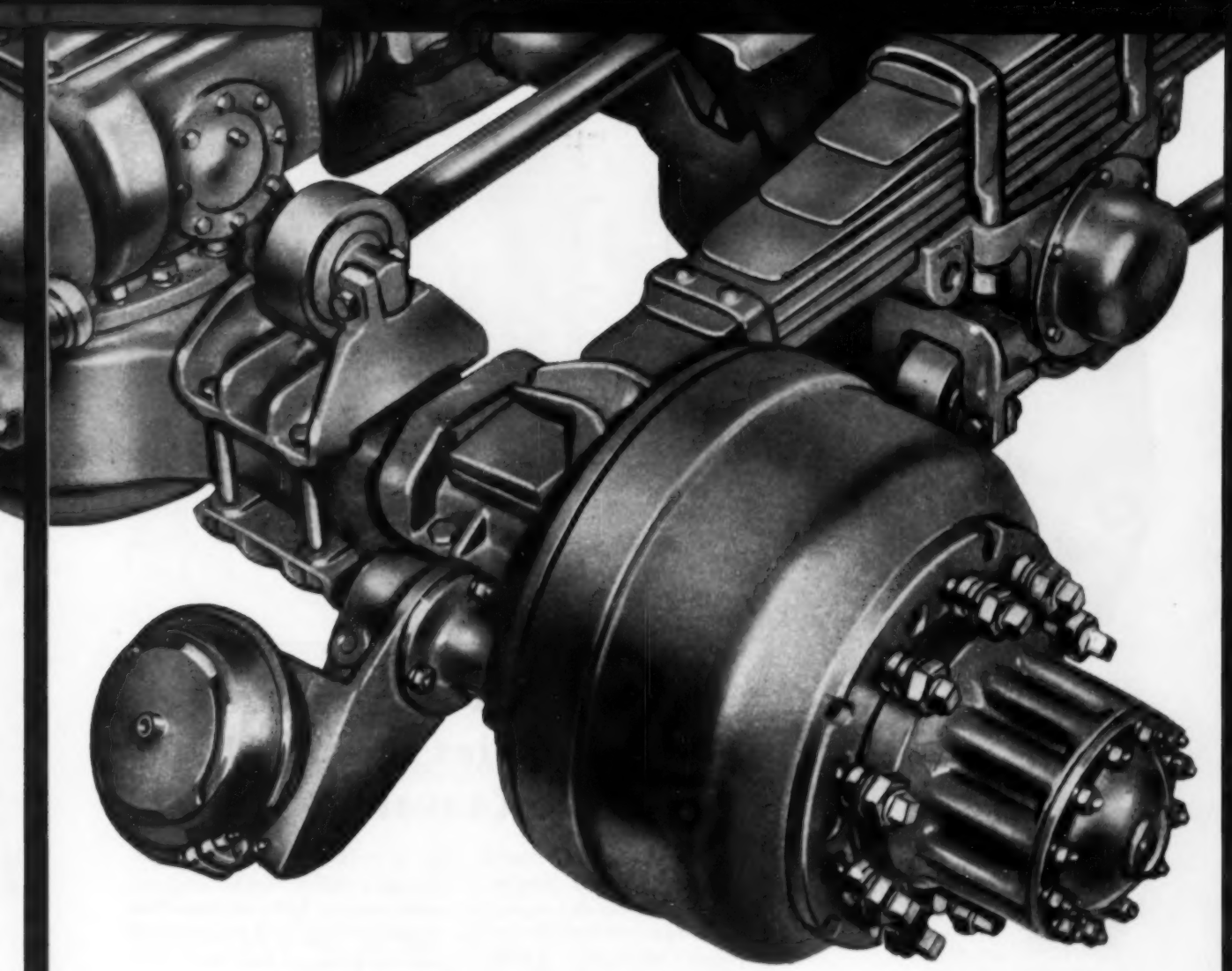
THIS HUSKY. TAKES THE TOUGHEST ROADS IN STRIDE!

Here is Timken-Detroit's® rugged, Timken® Inter-Axle Differential . . . lockout at any speed!

Moving the payload over rough logging roads – *fast!* That's the goal of truckers today. Muddy roads can mean delays. That's why rugged, dependable TDA® tandems help make logging operations profitable.

For almost 40 years, Timken-Detroit has been building tandems for logging. Behind every axle lie years and years of experience as the leader in the field. The most important part of any Timken-Detroit Axle is the assurance of dependable performance that comes with it. Carefully engineered to the last detail! Tested and retested in the "indoor proving ground" and in the field! Built and assembled under rigid supervision to the most exacting specifications! Result: Tougher tandems to serve you better.

In the complete TDA tandem line, loggers have a choice of final drives in a full range of capacities . . . standard units that fit each need as though they were tailormade. Evidence of Timken-Detroit's superiority is found in features like . . .



heavy-duty tandem with exclusive

that gives driver-controlled

TDA Inter-Axle Differential Divides Torque Evenly Between Axles . . . and yet permits wheels of one axle to revolve faster or slower than wheels of the other axle. This means both axles are always doing equal amounts of work, driving parts and tires last longer.

Driver-Controlled Lockout—With TDA inter-axle differential, the driver can obtain the advantages of straight-through drive under muddy, soft, or icy conditions by locking out the differential at any driving speed.

Straight Line Through-Drive provides maximum articulation desirable for unimproved roads.

For complete information contact your nearest vehicle dealer or branch.

WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS

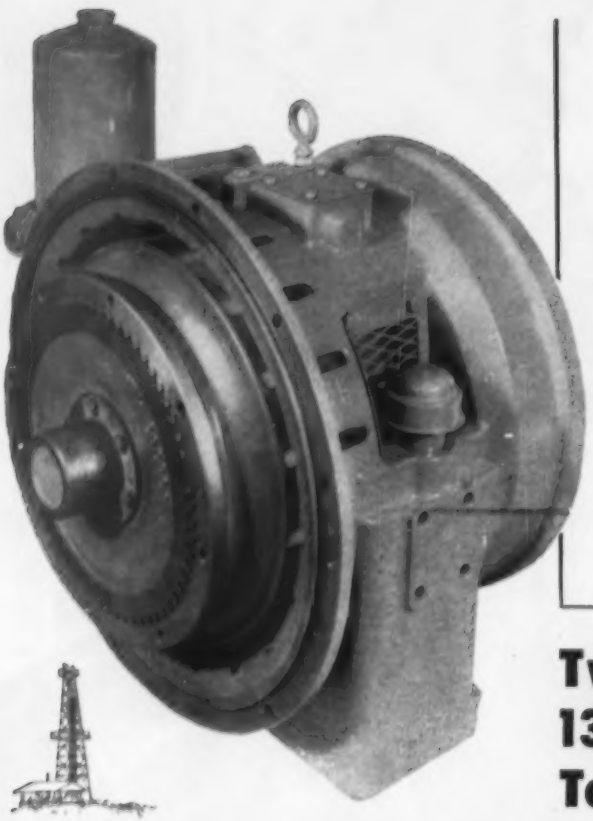
©1956 RS & A Company

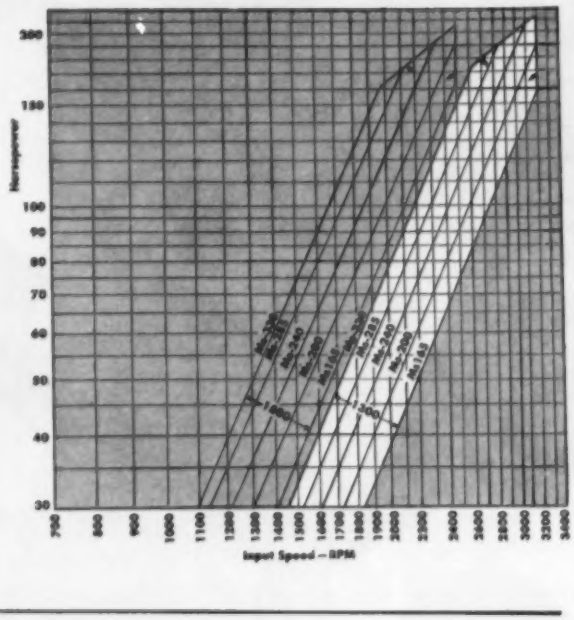
TIMKEN *Detroit* **AXLES**

TIMKEN-DETROIT AXLE DIVISION
ROCKWELL SPRING AND AXLE COMPANY
DETROIT 32, MICHIGAN

Accepted TDA *Standard*
TRADE MARK REGISTERED

Plants at: Detroit, Michigan • Oshkosh, Wisconsin
Utica, New York • Ashtabula, Kenton and
Newark, Ohio • New Castle, Pennsylvania





Twin Disc offers new 1300 Series Single-Stage Torque Converters

To meet the growing trend toward higher speed diesel and gasoline engines, Twin Disc Clutch Company announces its new 1300 Series Single-Stage Torque Converters . . . a series that offers ideal torque ratings for shovels, materials handling equipment, small industrial locomotives, front-end loaders, hoisting machinery, road rollers, graders and many similar applications.

The new 1300 Series Single-Stage Torque Converters are rated from 30 hp at 1450 rpm to 212 hp at 3200 rpm . . . with impellers available for specific torque ratings of 165, 200, 240, 285 and 330 pound-feet.

Current production of the 1300 Series consists of one model—the Model "F." This is a spacer-type arrangement with an SAE No. 2 flywheel housing size and either an SAE No. 2 or No. 3 output housing.

Like the Twin Disc 1500 Series Single-Stage units, the 1300 Series has an exclusive blade design which develops a counter-head at high-speed ratios, stopping fluid circulation. This simplifies design and construction and eliminates the need for a free-wheeled stator.

Impellers having different bladings (both number of blades and pitch) are interchangeable, permitting torque capacities to be matched more accurately to engines of various hp sizes and speeds.

The 1300 Series cooling requirements are minimized because of a rotating impeller housing which provides air circulation through the ventilated stationary housing.

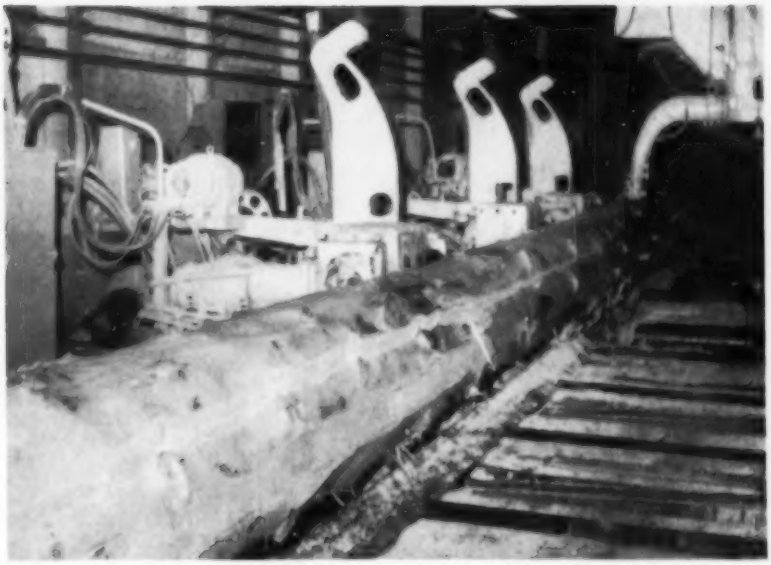
If you've been considering a torque converter in your machinery designs, or are dissatisfied with your current single-stage units, investigate today the benefits offered by the new Twin Disc Single-Stage Torque Converters. Write for Bulletin 508 Supplement.

TWIN DISC

TWIN DISC
Torque Converters

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

Branches or Sales Engineering Offices: Cleveland • Dallas • Detroit • Los Angeles • Newark • New Orleans • Tulsa



AT WEYERHAEUSER'S Coos Bay, Ore. branch, unit is Sel-Set by Forest Products Engineering.

Riderless Carriages Help Milling

THE TREND TOWARD USE of riderless carriages continues, with a swing toward the larger mills. Within the past year Weyerhaeuser Timber Company has installed two units, one to work with a big head rig and the second on a pony side. Both units are paying off in better lumber production.

At the company's Coos Bay, Ore., branch the big log headrig was converted. Manager Art Karlen reports about the same output per day as previously, but one less man is used, with the sawyer in full control of all operations.

The carriage is a Sumner 40-foot four-block unit, with 84-inch opening, working with a 10-foot double-cut Filer and Stowell band mill. The set works on the carriage were converted to remote control with a SelSet unit, made by Forest Products Engineering Co.

At Weyerhaeuser Timber Co.'s No. 1 mill at Longview, Wash., improved lumber production can be noted according to Production Mgr. Robert Schliewe, as result of converting a pony-rig carriage to remote control setting. Specifically he points out that the cuts are more accurate and the sawyer likes the resultant operating conditions. By doing the setting himself, in addition to the other sawyer functions, he finds elimination of a setterman advantageous. Adding the setting function to the sawyer's duties has the net effect of unifying the job. The sawyer is no longer burdened with the responsibility of continuously checking to see that his signals are accurately followed and properly executed. And he no longer has to be concerned about the safety of the setter.

NOW THE SAWYER presets for desired thickness of the next cut and the cant automatically advances to specified position upon activating the control. His timing has also improved as result of taking over the setting functions.

This carriage, a four-block 26-ft. Prescott which receives cants from main headrig for detail sawing, was converted to a riderless carriage by installing remote-control, pre-set "Selectric" setworks made by Mill Equipment, Inc., Seattle, Wash.

That the head sawyer can, by using modern remote-control setworks, advantageously do his own setting has been widely demonstrated in the small-mill field. Similar application is now taking place among the larger mills.

AT WEYERHAEUSER'S Longview, Wash. branch, unit is "Selectric" by Mill Equipment, Inc.

Plant Adds End Gluing Unit to Operations

• Using modern wood-gluing techniques, Weyerhaeuser Timber Company's Springfield, Ore., branch has begun making long boards out of short ones.

For several years, the company's Springfield plant has been edge gluing lumber to produce wide boards from narrow ones. Now the firm has installed and is operating equipment to end glue lumber and produce long boards from short ones. Using a combination of end and edge gluing, the Springfield plant can produce long, wide boards from short, narrow pieces of lumber.

Some of the short, narrow pieces now used in end and edge gluing were previously used for cheaper, lower grade lumber and occasionally for powerhouse fuel.

The lumber for end and edge gluing is specially dried to low moisture content. Joints for edge gluing lumber are prepared by ripping boards with special saws that leave a smooth, square edge. A special machine cuts the finger joints which are used to glue boards end to end.

In its Springfield plant, Weyerhaeuser uses a high-frequency electronic press to set the glue in the edge-gluing process. In tests the edge-glued joint has proved stronger than the wood itself. Weyerhaeuser Timber Company's Longview, Washington, branch also produces end- and edge-glued lumber.

Customers who purchase the glued-up lumber use it for such items as railroad car lining, furniture, cabinet work and shelving.

AN IMPORTANT ANNOUNCEMENT

THE Timberman & THE Lumberman

. . . the two leading production journals in the lumber, logging and forest products fields, have combined their facilities to serve the great timber industry more effectively.

It has been apparent for some time that the vigorous growth and changing trends of the timber industry of North America have required new and broader concepts in the editorial services and distribution of the journals serving this major and basic industry.

To this end, the publishers will as quickly as subscriptions can be reclassified and consolidated, redesign both THE TIMBERMAN and THE LUMBERMAN as two separate, highly specialized twin forest industries journals. The editorial content and format of both magazines will be refashioned so that each will serve one of the two natural divisions of the industry.

For the first time, readers and advertisers will be furnished with two publications each of whose editorial content and distribution will be exactly tailored to their requirements. Advertisers whose products have application in one or the other of the two divisions of the industry—logging or wood manufacturing—can channel their sales messages to more readers whose buying interests are directly concerned with both the editorial pages and products advertised. In short, advertisers can now buy the undivided attention of the buying influences in the forest industries where it best serves their needs.

WILLIAM B. FREEMAN
President

MILLER FREEMAN, Jr.
Secretary-Treasurer

LAWRENCE K. SMITH
Vice President

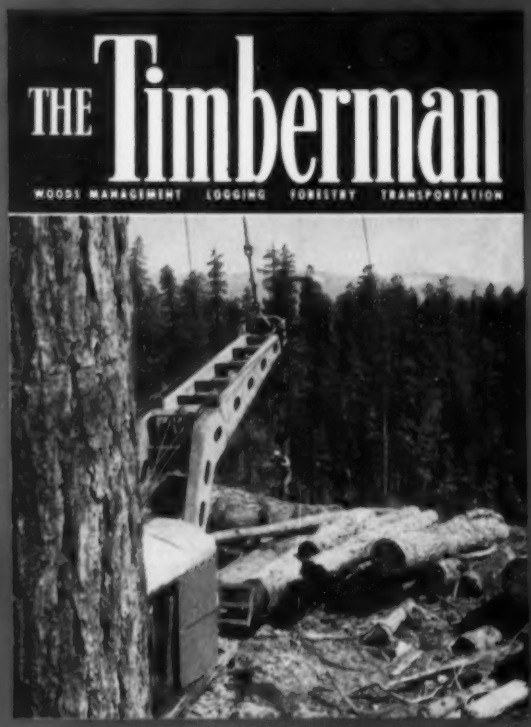
EDGAR P. HOENER
Vice Pres., Publisher

Constructively serving industry since 1902

MILLER FREEMAN PUBLICATIONS

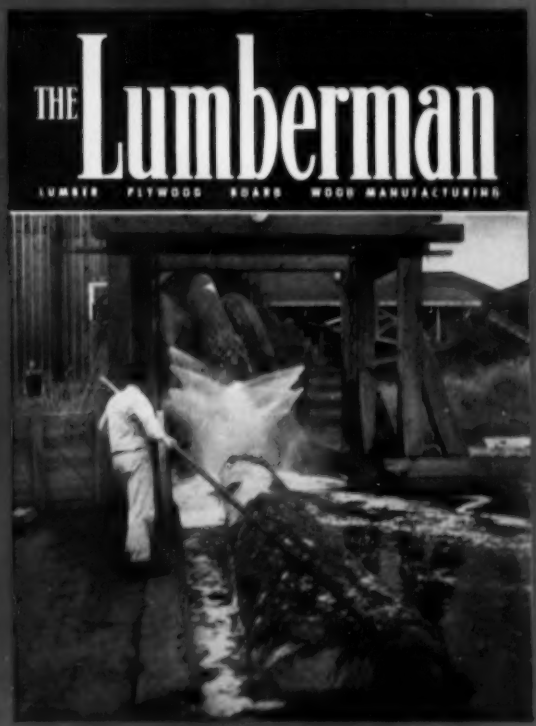
Executive Office: 500 Howard Street • San Francisco, California

PORTLAND • SEATTLE • LOS ANGELES • CHICAGO • NEW YORK • ATLANTA • VANCOUVER, B.C.



THE TIMBERMAN, combining the facilities of THE LUMBERMAN, will specialize exclusively in serving the logging, woods management, forestry and transportation fields . . . with editorial emphasis on production, methods, equipment, statistics and timber research.

THE LUMBERMAN will be redesigned to specialize exclusively in serving lumber, plywood, board and wood manufacturers. It will combine into its services the facilities of THE TIMBERMAN in coverage of production, marketing statistics and research of the manufacturing side of the forest industries.



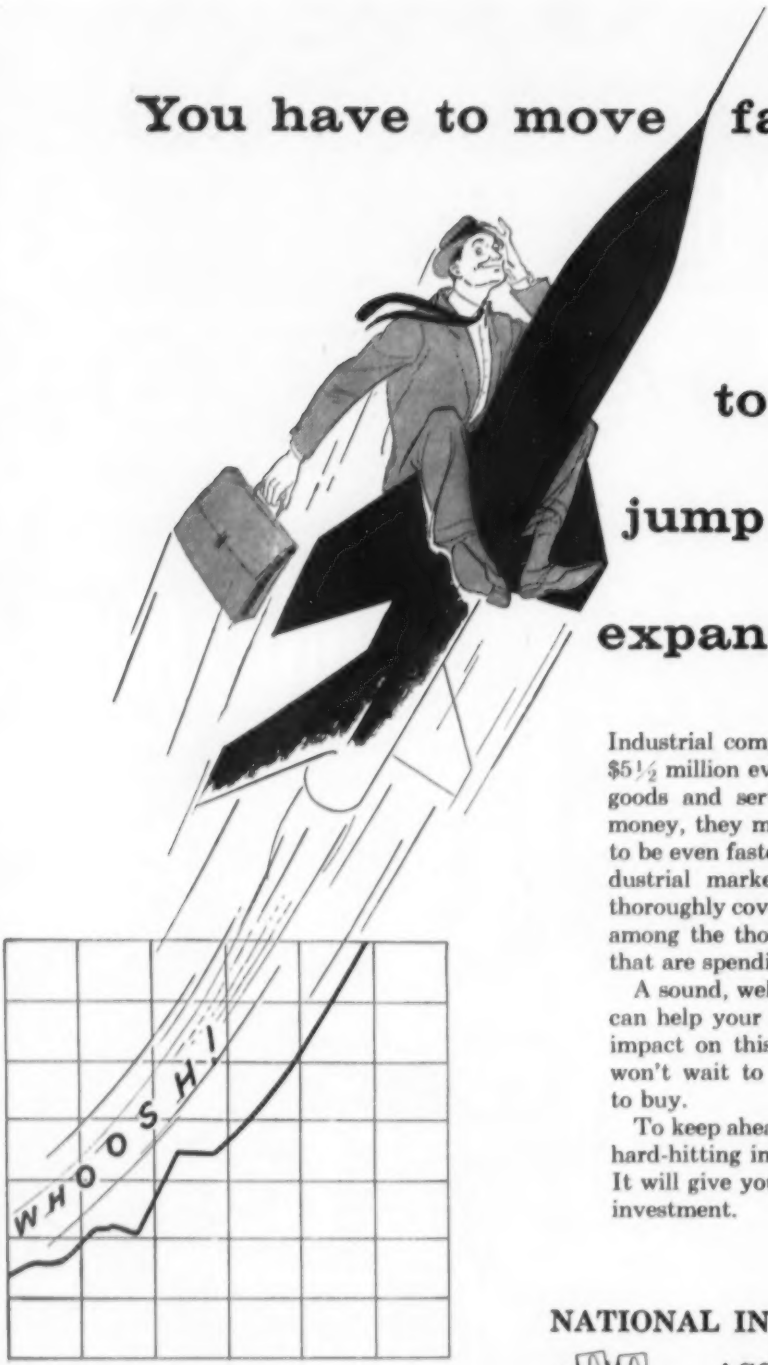
THE TIMBERMAN and THE LUMBERMAN will each publish 13 issues annually, with both journals geared to a cycle of publishing alternately, every two weeks, for a combined total of 26 editions a year. One of the editions will be featured as the Annual Plywood Review, previously pubished for 26 consecutive years by THE TIMBERMAN, and one will be dedicated as the Forest Industries Yearbook Number, long published by THE LUMBERMAN.

Editorial plans call for the addition of many constructive editorial features on progressive management methods, vastly enhanced news coverage of the industry will be published in an up-forward news section of both journals—significant facts vital to management men in both divisions of the industry, and reaching them regularly every other week. Owners and managers—and those aspiring to greater managerial responsibilities—will read both THE TIMBERMAN and THE LUMBERMAN. That is why firms to whom the forest industries represent an important market should utilize both journals for their advertising.

The TIMBERMAN and The LUMBERMAN

PUBLISHING OFFICE: 519 S. W. PARK AVE., PORTLAND 5, OREGON

You have to move fast



to get the jump on today's expanding market

Industrial companies are spending more than $5½ million every twenty minutes for needed goods and services. In spending that much money, they move mighty fast. But *you* have to be even faster to sell to today's dynamic industrial market. Especially if you want to thoroughly cover your customers and prospects among the thousands of industrial companies that are spending this vast sum.

A sound, well-balanced advertising program can help your sales force make an immediate impact on this big market—the market that won't wait to be sold, because it can't wait to buy.

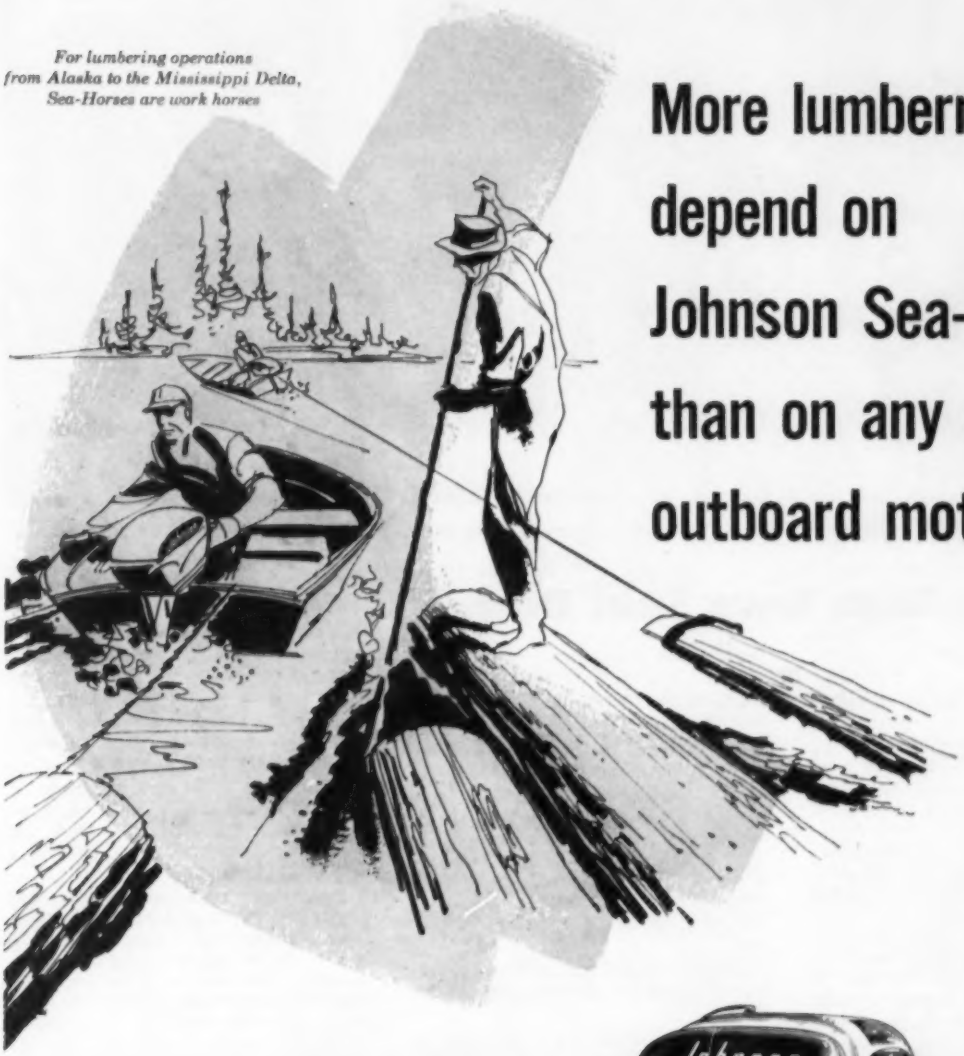
To keep ahead of this expanding market, put hard-hitting industrial advertising on the job. It will give you a greater return on your sales investment.

NATIONAL INDUSTRIAL ADVERTISERS ASSOCIATION, INC.

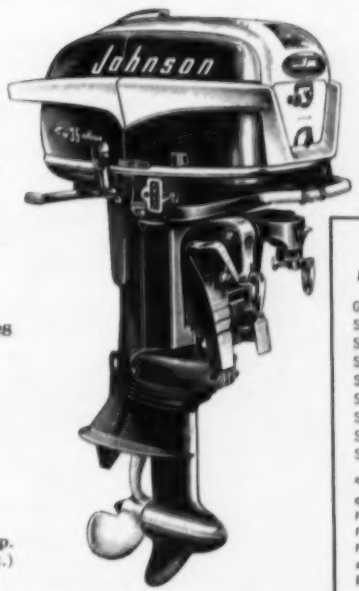
271 Madison Avenue, New York 16, N. Y.

An organization of over 4000 members engaged in the advertising and marketing of industrial products, with local chapters in ALBANY, BALTIMORE, BOSTON, BUFFALO, CHICAGO, CLEVELAND, COLUMBUS, DALLAS-FORT WORTH, DENVER, DETROIT, HAMILTON, ONT., HARTFORD, HOUSTON, INDIANAPOLIS, LOS ANGELES, MILWAUKEE, MINNEAPOLIS-ST. PAUL, MONTREAL, QUE., NEWARK, NEW YORK, PHILADELPHIA, PITTSBURGH, PORTLAND, ROCHESTER, ROCKFORD, ST. LOUIS, SAN FRANCISCO, TORONTO, ONT., YOUNGSTOWN.

For lumbering operations from Alaska to the Mississippi Delta, Sea-Horses are work horses



More lumbermen depend on Johnson Sea-Horses than on any other outboard motor



New for '57—"sweetest-running Johnsons ever"

There are two new power classes in our '57 line—with five load-loving Johnsons now delivering 18 or 35 hp. Nine new motors in all, each now equipped with a drive pin saving slip-clutch. And each protected against salt water corrosion, so no flushing is necessary.

Johnson leadership in commercial outboard sales and use stems from one fact . . . Johnson dependability. Hour after hour, year after year, Sea-Horses deliver the goods—at all speeds and under all conditions of load. See your Johnson dealer now. He's listed in the Yellow Pages.

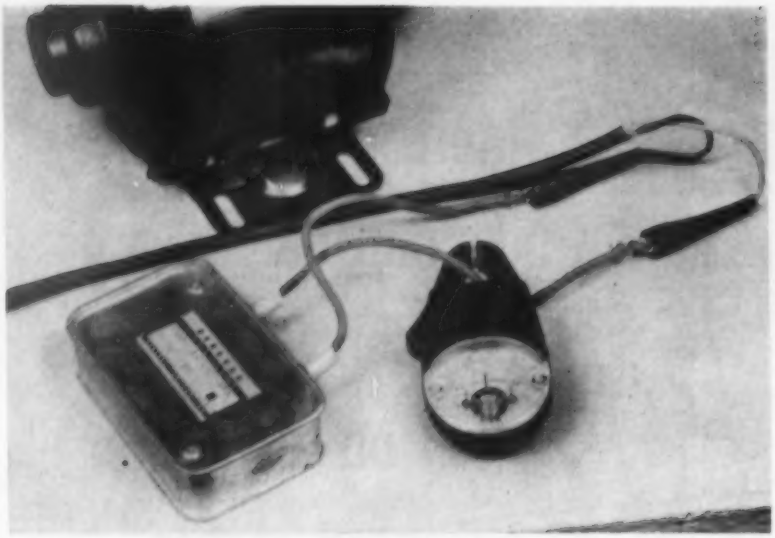
FREE! 1957 Sea-Horse catalog, write: Johnson Motors, 180 Pershing Rd., Waukegan, Ill. (Div. of Outboard Marine Corp. In Canada: manufactured by Johnson Motors, Peterborough, Ont.)

FOR '57! A WIDE AND WONDERFUL CHOICE!

Golden Javelin*	35 hp.	$625
Sea-Horse 35*	35 hp.	585
Sea-Horse 35	35 hp.	495
Sea-Horse 18*	18 hp.	475
Sea-Horse 18	18 hp.	395
Sea-Horse 10	10 hp.	340
Sea-Horse 7½	7½ hp.	260
Sea-Horse 5½	5½ hp.	230
Sea-Horse 3	3 hp.	155

**12-volt electric starting (new quick-charging 10-ampere generator with automatic voltage regulator available as accessory on first two models). Prices f.o.b. factory, subject to change. OBC certified brake hp at 4000 rpm (18s and 35s at 4500)*

A million Sea-Horse owners will tell you ***JOHNSON KNOWS BEST***



CHECKING MOTOR capacitators with split-core A.C. Volt-Ammeter is shown in above photo.

FUSE CHECKING with the Volt-Ammeter.

Electrical Tests Save Shut Downs

By
LYNE S. METCALFE

PROFITABLE OPERATION of any lumber mill has always depended, to a great extent, upon the continuous maintenance of sufficient electrical current.

This safeguarding of power becomes largely a matter of correct, scientific voltage and amperage testing at proper predetermined intervals, and with methods which assure exact readings.

Great strides have been made in recent years in the development of special techniques and devices to make these tests easily performed by practically any employee in the course of regular routine operations.

The measurement of voltage and current requires the use of two basic instruments. One is a voltmeter—the other an ammeter. In order to correctly measure voltage, the test leads of the voltmeter are placed in contact with the terminals of the line which is undergoing test. In measuring current, the conventional ammeter must be connected in series with the line, so that the current will flow through the ammeter.

IT HAS BEEN NECESSARY in the past when inserting the conventional ammeter to completely shut down the equipment. The line had to be broken open, then the ammeter connected, the equipment started again, and then the reading made of the meter. Following this, in the old manner of performing this operation, as much work was involved all over again in removing the ammeter from the line.

Many of the disadvantages of the older ways of making those tests have tended to be eliminated through the development of the so-called split-core A. C. Volt-Ammeter which is now becoming widely used in the trade.

Also, because of the importance of having the testing device instantly at hand at all times and quickly available to apply, the "snap-around" designed ammeter and volt-meter, combined in one instrument, has become widely used.

Among the features included in this type of tester are the following advantages:

- It is available in a pocket size. It can be carried in a worker's belt, or even in a brief case.
- It has insulated probing jaws which reduce the hazards of getting "shorts," as for instance, when working in switch boxes.
- It contains a "window" for reading with much higher visibility because it is rimless and the reading scale is flooded with light from all sides at once.
- It is dustproof and always in clean working condition.
- It can be operated conveniently in, and with one hand, range switches, can be worked with one finger.
- It possesses new safety type voltage test leads which protect the user against short circuits and more serious shocks.

THE MODERN PLANT, with its usual intricate electrical system, now more than ever before, finds increasing needs for careful and continuous electrical testing. Likewise, this involves equally modern methods for doing it.

It is of great importance to have regular measurements of load current made periodically by wire checking against the fuse or plate ratings.

It is also necessary to test for "shorts" because these often will show why fuses are being blown.

Frequent tests must be made of electrolytic capacitators or condensers, line voltage measured, tests made for "opens," motors tested for "grounds," and fuses checked.

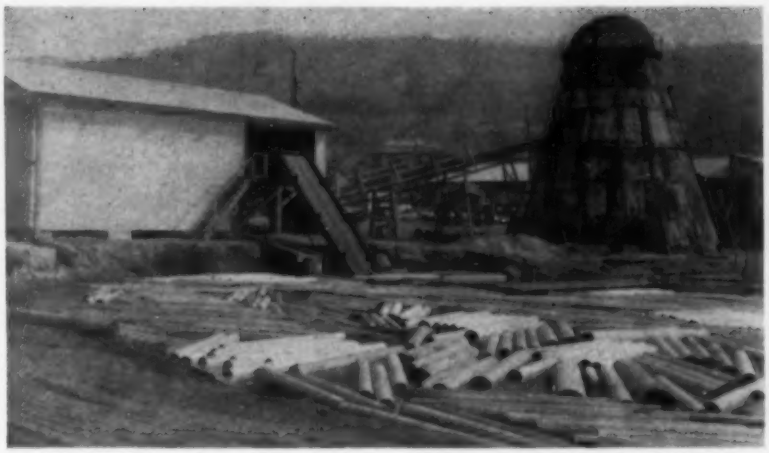
The very advantages that electrical power granted to modern industry also brought along with it the requirement that it be understood in order to be properly controlled and harnessed to improve production. This, in turn, gave rise to the necessity of becoming intimately familiar with the agencies represented in electrical equipment and devices needed to correctly utilize such power.

Today most electrical headaches in *modern* plants are growing less and less prevalent. The many advances and improvements made in the design and construction of testing devices in the fields of amperage and voltage have solved a large part of the basic problems which formerly used to baffle plant operators, and even some of the technicians.

Pine Directory Available

• The 1957 membership directory of the Western Pine association is ready for distribution from the Portland, Ore., headquarters.

The directory lists the facilities, products and plant and sales office locations of the group's 375 members and their 440 manufacturing plants. It is 8½x11 inches in size, 20 pages, and punched for insertion in ring-binders.



DOUGLAS FIR Lumber Company at Gold Beach, Oregon has added a Salem scrag mill to its facilities. It cuts 45 to 50M bd. feet per 8 hour shift, uses peeler cores and small logs.

Mill Adds Scrag Unit for Cores

GREATER UTILIZATION of small logs and peeler cores is accomplished with a Salem two-saw scrag mill installed by Douglas Fir Lumber Co., Gold Beach, Ore. for cuttings 2x4's. E. A. Nussbaumer is manager.

Cores are obtained from Evans Products Co. at Hunter's Creek and from Port Orford Plywood Corp. at Port Orford. The mill, housed in a 40x40 ft. building, turns out about 45 to 50M bd. ft. per shift with three men on the mill floor, plus two men building up packages. The mill operates on night shift only.

Logs enter on a jack ladder lift, pass through the Salem scrag mill, then the Salem edger and a two-saw end trimmer. The trimmer drops 2x4's onto a 25 ft. long green chain 10 feet below the sawmill floor level. Here stock feeds off the end and is built up into bundles, which are strapped with one Acme band and hauled off by lift truck.

Douglas Fir Lumber Company's existing facilities include the big log double circular sawmill which cuts 50M bd. ft. daily. Equipment includes a Kalen Electric drive feedworks, a Monarch log turner, an American Steel log stop and loader, a Schurman 6x48 inch edger and air trimmers.

Chip Conveyor Systems Reported in B. C.

• One of the biggest chip conveyor systems in the Pacific Northwest is the one installed by Conveyair at the MacMillan & Bloedel mill at Harmac, Vancouver Island. It will handle 90 units of wood chips per hour when in full operation.

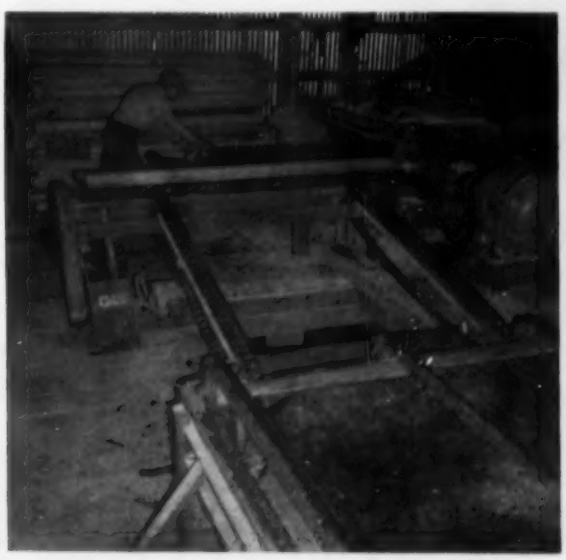
Conveyair equipment for handling chips is now being installed at Soundview Division, Scott Paper Co., Everett, Washington, where a pressure system to blow chips to storage will soon be in operation. This system will operate in conjunction with a vacuum chip rail car unloader also installed by Conveyair.

Elk Falls Co. at Duncan Bay also is putting in an extensive Conveyair system to carry chips from its new wood room to storage silos. This system handling 30 units per hour will be the longest in British Columbia at 1,380 feet.

John Epp, sales manager of Conveyair, Vancouver, B. C., recently returned from a tour of the Southern states, where sawmills in Tuscaloosa and Mobile, Ala., are installing Conveyair hog fuel and chip conveyors.

In the Vancouver area one of the newest Conveyair installations is at the new $2,000,000.00 sheathing plywood mill of MacMillan & Bloedel. Other recent installations in the Vancouver area are at Canadian Western Lumber, Fraser Mills Div., New Westminster; Timberland Lumber Company, New Plywood Plant, Vancouver; Norwood Lumber Company, North Vancouver; Bay Lumber Company, Vancouver; Silvertree Sawmills, Ltd., Vancouver; along with three new systems at the jointly owned Rayonier-Alaska Pine, Rayflo plant.

SALEM TWO-SAW scrag mill is driven by 150 hp. electric motor.



SALEM EDGER shown here receives stock from Salem scrag mill.

WORKERS FEEDING WATKINS slab barker at the Olon Belcher Lumber Company, Brent, Alabama.

Barker and Chipper Help Solve Higher Labor Costs

Olon Belcher Lumber Company in Alabama finds residue utilization profitable.

ONE OF BELCHER'S "Road Truck" fleet with trailer bearing 19,600 ft. of 1 x 10 No. 2 pine S4S for export through Mobile, Ala., for Puerto Rico storm damage repair.

HIGHER LABOR COSTS have been met through expansion of marketable products by Olon Belcher Lumber Co., Brent, Ala. The mill installed a round log debarker in November, 1955. In September, 1956, it installed a Watkins slab debarker, fed by the mill's own residues and also by an additional volume purchased from small mills.

From November 23, 1955 to March 8, 1956 (about 74 eight-hour working days) the mill produced 70 cars of pine chips amounting to 1,064,970 units of 210 cubic feet each with gross receipts of $14,643.35. Net weight of chips per unit of 210 cubic feet was 5,878 lbs. Pine lumber manufactured during the period amounted to 2,095,-934 feet. Average production of chips produced per 1000 feet of lumber was .508 units. About 20-percent of mill lumber production is hardwood, of which oak and gum are barked.

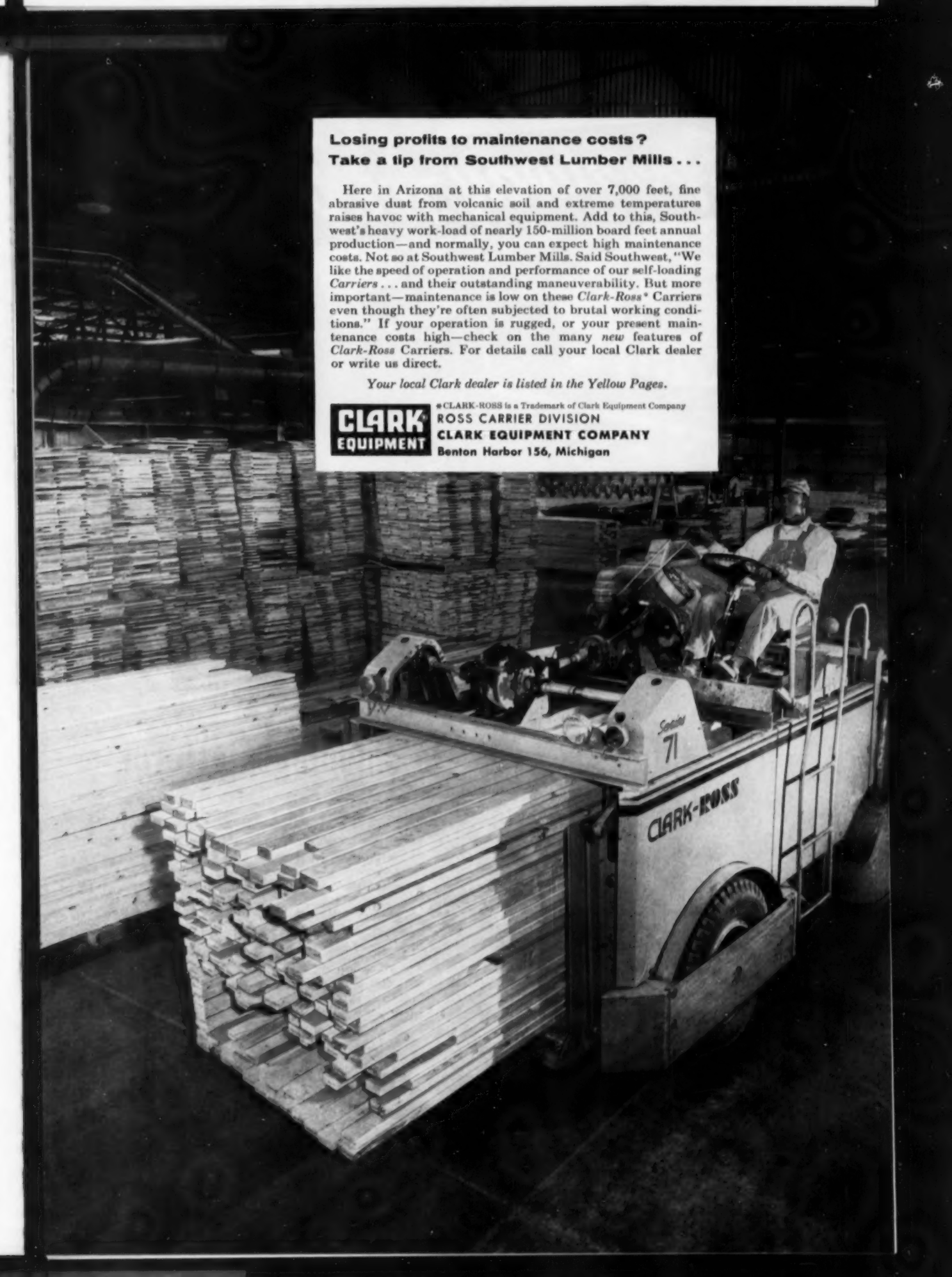
Logs are moved through the Nicholson rotobarker, thence to a deck saw where they are cut to length. The log deck, following, serves a Wheland bandmill. Heavy slabs and thick cuts are shunted left by transfer and are then fed through a horizontal Prescott resaw, equipped with standard merry-go-round. Edgings and trimmer cuts drop into the conventionally placed conveyor at right, moving back along the edge of the mill to the fuel hog. At one point en route an operator picks the desirable clean edgings and drops them into a parallel conveyor to the Soderhamn chipper below. Discharge from chipper is upward and onto the screen, thence through a cyclone to a waiting railroad car.

Slabs purchased from small mills for barking are lifted from arriving trucks with a Gerlinger lift truck and placed on a mill-deck-height steel frame chain conveyor. As required, they are moved inward by pushbutton control to where they can be pulled down by hand for feeding (horizontal) into the barker. Barked slabs are discharged toward the rear of the mill, where an apron sends them into the chipper feeding conveyor. Mill clean residues and barked purchased slabs go to the chipper together.

Brent is in Alabama's good pine belt, not far from Birmingham—the principal industrial center—and close enough to the port of Mobile to permit rapid on-the-spot deliveries for export. Lumber is shipped both by rail and by truck, with the company maintaining a pair of "road trucks" with big trailers. One of these, an International Harvester L-190 was loaded at the time of LUMBERMAN's visit with 19,600 feet of 1x10 No. 2 pine S4S for use in repairing storm damage in Puerto Rico. That project required seven million board feet, of which Olon Belcher Lumber Co. furnished 150M feet.

Principal of the lumber company is Olon Belcher.

ELEVATED "SLAB" DECK (photo at left) for debarking log slabs at Olon Belcher Lbr. Co. Note Watkins barker at right end of slabs.


Losing profits to maintenance costs?
Take a tip from Southwest Lumber Mills . . .
Here in Arizona at this elevation of over 7,000 feet, fine abrasive dust from volcanic soil and extreme temperatures raises havoc with mechanical equipment. Add to this, Southwest's heavy work-load of nearly 150-million board feet annual production—and normally, you can expect high maintenance costs. Not so at Southwest Lumber Mills. Said Southwest, "We like the speed of operation and performance of our self-loading *Carriers* . . . and their outstanding maneuverability. But more important—maintenance is low on these *Clark-Ross** Carriers even though they're often subjected to brutal working conditions." If your operation is rugged, or your present maintenance costs high—check on the many *new* features of *Clark-Ross* Carriers. For details call your local Clark dealer or write us direct.
Your local Clark dealer is listed in the Yellow Pages.
CLARK EQUIPMENT
*CLARK-ROSS is a Trademark of Clark Equipment Company
ROSS CARRIER DIVISION
CLARK EQUIPMENT COMPANY
Benton Harbor 156, Michigan
Series 71
CLARK-ROSS

Speedway for profit

from COE Lathe to shipping platform

Constantly the veneer plant manager seeks to minimize the time from lathe to shipping deck. Daily he notes the speed through his lathe, clipper, dryer and the following operations. Constantly he seeks ways to cut down losses in time and materials, ways to gain efficiency in man-power and methods. It is only by this constant attention that he can maintain and improve his profit margin, — that increment by which success is measured and which is constantly under attack by opposing forces.

One source of confidence to him is the COE name plate on succeeding machines as the veneer speeds on its way. Coe's reputation for building reliable machines is insurance against break-downs that interrupt production and in addition Coe's continuing development program provides a source for dependable machines designed to run at faster speeds.

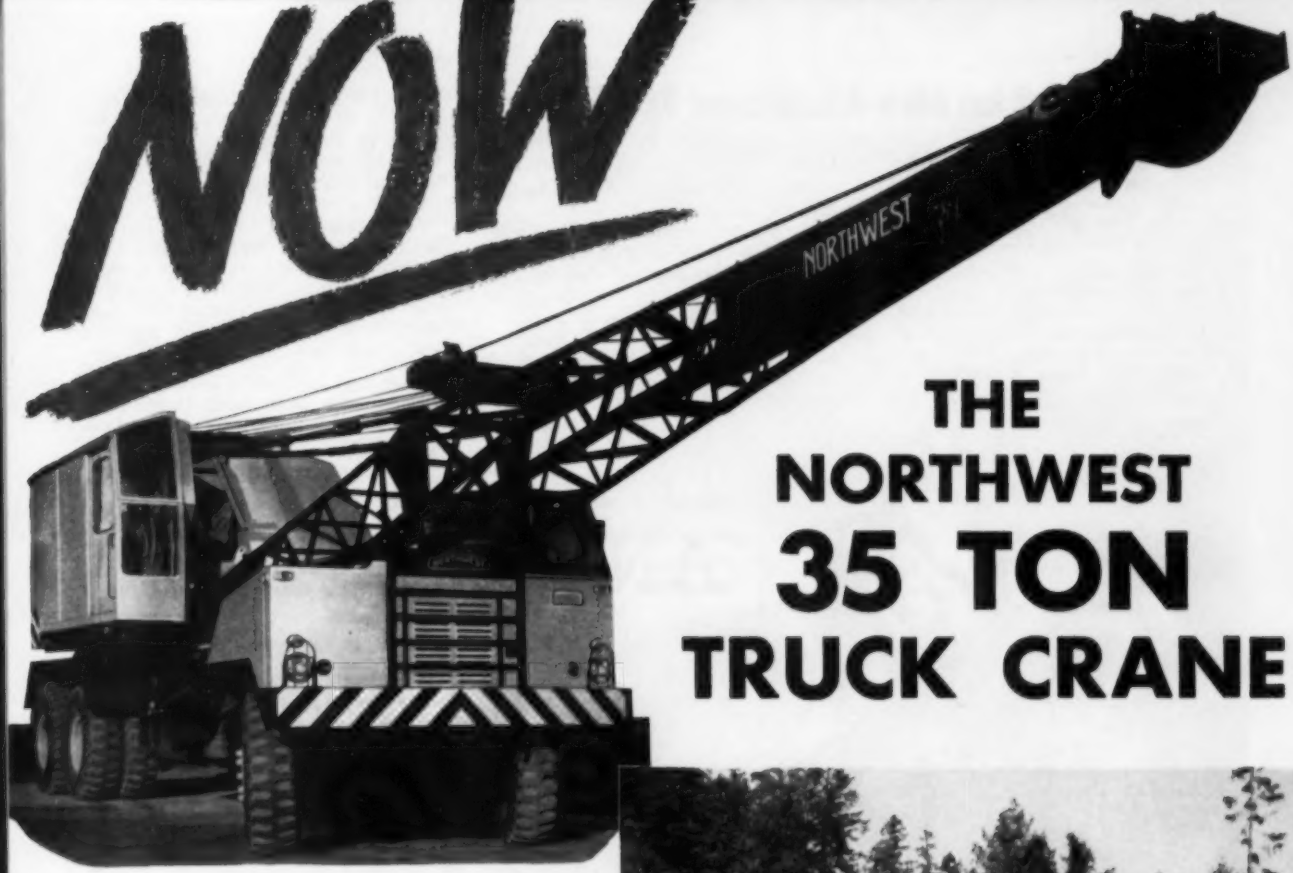
Are you availing yourself of the best tools that can be used to keep your profit margins at a maximum? Do you have a Coe Speedway for Profit?

THE COE MANUFACTURING COMPANY

PAINESVILLE, OHIO

LATHES • CLIPPERS • DRYERS • KNIFE GRINDERS

NOW



THE NORTHWEST 35 TON TRUCK CRANE

A NEW NORTHWEST TRUCK CRANE—the 41 TC makes possible the selection of just the right Northwest machine on rubber to suit your job.

Here is a unit that, like all Northwests, is aimed at producing the maximum results profitably, steadily and at minimum cost. The 41 TC brings you all of the proved Northwest advantages—advantages that have made money for Northwest owners. And, it brings you more!—New features that you will be interested in finding out about.

If you need a Truck Crane get full details on Northwests on rubber—Available in 25-ton and 35-ton capacities. Ask a Northwest Man for full details.

NORTHWEST ENGINEERING COMPANY
1510 Field Building, 135 South LaSalle Street, Chicago 3, Illinois

NORTHWEST

NORTHWEST SALES OFFICES:

SEATTLE, WASHINGTON
1234 Sixth Avenue, South

SAN FRANCISCO, CALIFORNIA
255 Tenth Street

VERNON 58, CALIFORNIA
3707 Santa Fe Avenue

T35-2-10

The Trend in the Lumber Industry

by
Brian B. Gattie

EDITOR'S NOTE: The following are highlights from a talk presented by Mr. Gattie at the 14th Annual Convention of the Truck Loggers Association, in Vancouver, B.C., January 16-18.

IN THE LAST 12 YEARS there has been a noticeable trend away from the use of sawn lumber towards the use of products made from woodfibre or from veneers produced from peeled or sliced logs. There is also an increasing trend towards the production of wood chemicals.

Mr. Gattie is general manager, Western Forest Industries Ltd., Vancouver, B.C.

Such a trend does not necessarily mean that sawmilling must decline. It means sawmilling will not increase to the extent it might do were it not for these alternative uses.

For the last 50 years, substitutes for lumber have been found of all and every kind. Yet the volume of lumber consumed in the world is probably greater than ever before. Were it not for these substitutes, both those made of forest products and also those made of other materials, forests of the world possibly could not meet the demand there would currently be for sawn lumber.

The trend must be for an increasingly larger percentage of man's requirements to be furnished in a more highly processed state than a piece of saw lumber. Our ancestors split their wood with a stone headed axe—we use a hand saw.

IN GREAT BRITAIN THIS TREND was foreseen to be likely in the middle 1930's when the trade as a whole

• Photo taken in Kashmir

Is Your Resaw ANTIQUATED?

Install this...

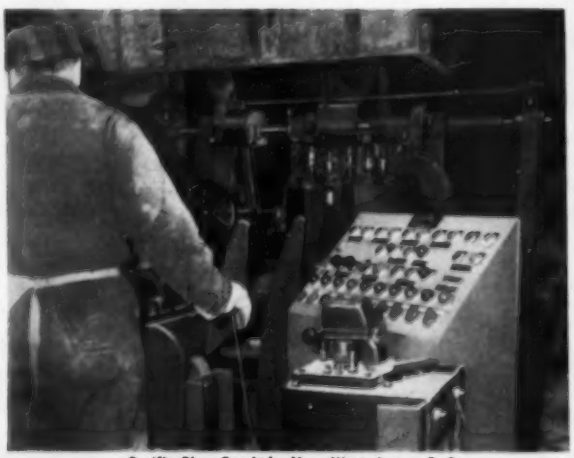
CONTROLS and COMMUNICATIONS CO.

MODERN AUTOMATICALLY OPERATED SET WORKS

***New* PRECISION ELECTRO-HYDRAULIC POSITIONER-ELECTRONIC CONTROL**

- **AUTOMATIC PRESET**
  To any number of dimensions.
- **REMOTE MANUAL SET**
  To any dimension, read off large accurate dial.
- **HIGH SPEED SETTING**
  Up to 10"/sec. on automatic set.
  Lower speed for precision remote manual set.
- **HIGH ACCURACY OF SET**
  Better than 1/32" guaranteed.
- **MINIMUM DOWNTIME**
  No clutches or brakes. Easy maintenance.

The basic system of the electro-hydraulic positioning control is used on edgers and sawyer-controlled riderless carriages. Setting speed and accuracy can be tailored to meet your requirements. For edger setworks the saws can be moved remotely (preset or non-preset) by setting coursers on a ruler bar that automatically indicate space between saws allowing for saw kerf.



Pacific Pine Co. Ltd., New Westminster, B. C.

For Automatic Control of any Process . . . *Consult*—

CONTROLS & COMMUNICATIONS CO.

1695 WEST FIRST AVENUE • EUGENE, OREGON • PHONE: DI 5-8561

formed the Timber Development Association to stimulate use of more sawn lumber by means of advocating new techniques and studying economics that could be effected. Shortly afterwards, a similar association was formed in Australia. Recently at Melbourne during the course of the present conference, a suggestion has been made for the formation of a Commonwealth Association. In British Columbia, the most active steps have in recent years been taken by the Trade Extension Bureau of the British Columbia Lumber Manufacturers Association which now annually spends considerable money in promoting the use of lumber, plywood and shingles with conspicuous success.

Far too large a proportion of lumber's delivered value consists of freight charges. This is true, not only of lumber delivered by sea on which freight is based on cubic measurement, but also on deliveries by rail. Because charges are made on actual weight it has been necessary for rail deliveries to be dressed and dried to obviate paying freight on waste material and water.

Lumber, therefore, is a more economical material to use nearer to its source of origin. One must expect a much higher per capita use in and near forested areas which, however, are not usually densely populated areas. Bulk of the softwood forest stands in the world are located between the Arctic Circle and the Temperate Zone of the Northern Hemisphere. Until the present time, most of the requirements of the rest of the world have originated in this area. Excessive cost of transportation, however, seems to be including the planting of fast growing species to provide the raw material closer to the area in which it is required.

This transportation problem can have a very marked impact on the future of the sawn lumber business in British Columbia.

THE TREND IN LOG SUPPLY is going to be gradual exhaustion of mature stands and increasing utilization of trees grown on our reforested land which will be very much smaller and younger in growth than the average of the mature forests we are now cutting. This factor of size alone will have its influence on many lumber items now supplied which the smaller logs cannot provide.

Many lumber items produced in the '20's and '30's have disappeared because most of the larger and better logs are purchased by plywood plants which can outbid sawmills. This trend will continue. When we finally have to rely exclusively on smaller logs, long heavy timbers, other lumber items such as ships' decking, bridge stringers, tank stock and ladder stock, produced in solid form, will also probably disappear and clear lumber such as we know it today will be eventually almost unobtainable.

(*Continued on page* 118)

Workmen pull Douglas Fir logs into a chain saw at the Coquille Mill.

"In Our Mill We Standardize on Aeroquip Flexible Hose Lines"

"THEY STAND UP UNDER 24-HOUR-A-DAY USE"

Reports W. L. Parry, Superintendent, Coquille Plywood Division, Coquille, Oregon

Coquille Plywood Division of Textron, Inc. operates one of the largest plywood mills in the Northwest. The company has standardized on Aeroquip Hose Lines because they have proved dependable under 'round-the-clock operation. Aeroquip is used for hydraulic, fuel and oil lines wherever possible throughout the plant, even on a fleet of lift trucks.

When replacement lines are needed, Coquille personnel assemble them quickly from Aeroquip Bulk Hose and Reusable Fittings. This minimizes equipment downtime.

Aeroquip can add dependability to your lumber operations, too. See the Aeroquip Distributor listed in your Yellow Page Directory, or write us for information.

This plywood clipper trimming plywood sheets, uses Aeroquip Hose Lines.

A maintenance man installs an Aeroquip Hose Line on a hydraulic lathe cylinder.

Aeroquip

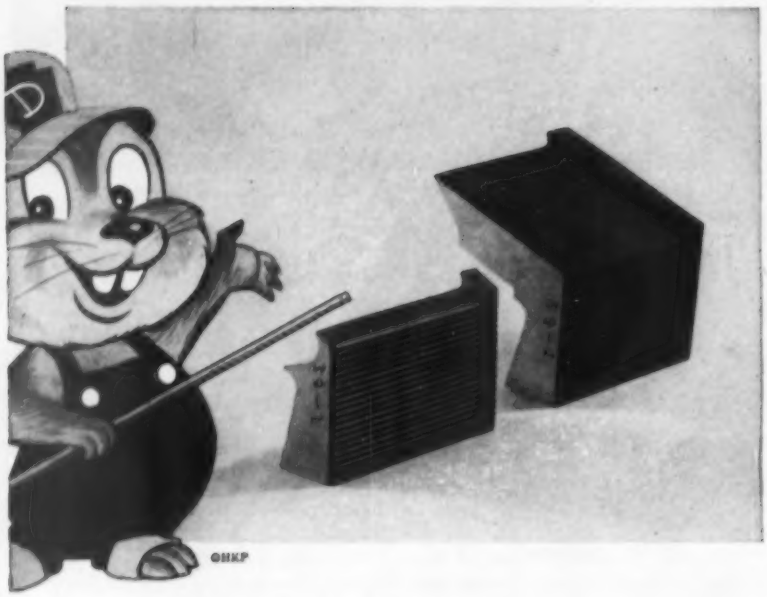
AEROQUIP CORPORATION, WESTERN DIVISION
BURBANK, CALIFORNIA

SALES OFFICE AND WAREHOUSE FOR OREGON, WASHINGTON AND IDAHO:

SPARKS-WILLS, INC., 1624 S. E. GRAND AVE., PORTLAND 15, ORE.

Chips Disston says:

"You know it's a DISSTON Cutter Head...



...when knives wear down to the end!"

Note the new knife and a worn-out knife above. See how the knife wears right down to the end? It's the special design of Disston Generated Type Cutter Heads—and the fact that knives are made of durable heat-treated steel—that does the trick.

In this instance, the knife gave a full 1 9/16" wear. This means especially long knife life, as well as retention of pattern. One set of knives similar to these made a record of 36 million lineal feet before they had to be discarded!

Interested in lower knife costs? Ask your Disston distributor *today* about Disston Generated Type Cutter Heads. He can tell you the whole story.

Got a cutter head problem? We'll be happy to supply you with any information you need on the application of Disston Generated Type Cutter Heads to your specific problems. Write:

Henry Disston Division
H. K. Porter Company, Inc.
Philadelphia 35, Pa.

HKP Henry DISSTON DIVISION
H. K. PORTER COMPANY, INC.

The Trend in the Lumber Industry

(*Continued from page* 117)

The nature and structure of trees on reforested lands is important. It is generally accepted that the quality of the lumber produced from second growth is very different from that produced from old growth. Main difference consists in rapidity of growth as evidenced by number of annual rings. Stresses and strains released when fast grown logs are sawn into lumber are far greater than in the slower growing types or in larger logs in which the wood is of milder texture.

Lumber of the future will not have the same static qualities and will be more liable to twist and warp.

WE MUST THEREFORE REDUCE the proportion which will be available to devote to higher class uses such as household joinery and trim, panelling, built-in furniture, etc. Bulk of the production would be suitable for two main purposes—packing and construction. For packing, sawn wood has already been eliminated almost entirely for all light packaging by substitute materials such as cardboard cartons and heavy packing is now composed frequently of a combination of lumber and plywood. Nevertheless, the volume of sawn lumber still used in packing cases and crates is very large and is likely to remain so as long as the supply remains economic.

In construction, steel has completely supplanted sawn lumber in buildings of heavy construction. So far no substitute has made any appreciable inroad in the construction of private houses. But the materials used are largely governed by their geographic availability. In many forest-shy countries, materials obtained locally such as stone, brick and concrete are used to the exclusion of sawn lumber which, however, has not yet been entirely eliminated. But probably some combination of light metal girders and plywood or hard board panels may become general construction practice.

Steadily increasing use of laminated materials is combatting the trend towards substitute materials and reduced size of available lumber. Impetus to this was given during the last war when the aircraft industry used beams of considerable thickness and of great depth and length to form front and rear spars of many powered aircraft and nearly all gliders. These were made in jigs from literally hundreds of small pieces of wood glued together under pressure with synthetic resins.

It is now common practice for laminated beams and arches to be used in light construction covering tremendous spans. To some extent, sawn wood can be said to have in these instances substituted for steel.

COST IN THE LONG RUN is the most vital factor. Transportation costs

on what is a partially processed raw material frequently are greater than the value of the article itself at its point of origin. In addition, the actual cost of processing a log into sawn lumber calls for far too much labor. In a modern sawmill, men engaged in production alone cannot produce on average more than four thousand feet per man per eight hour day when working on the easiest species under the most favorable conditions and with no lost time. In a modern push button pulp mill a man day production of several times the equivalent volume can be achieved.

Great improvements in automatic handling have gradually been achieved. But much remains to be done if lumber is to retain its place competitively with both alternative forest products and other substitute materials. As more uniform log sizes are cut, modern sawmills will be more automatic.

Then there is the cost of the log. It is difficult to apply automation to logging. Most of the advances in logging technique have enabled forest stands to be made accessible. It is difficult at the present time to be reconciled to a log market price common to three forms of processing whereby pulp mills not in full production earn a good profit whilst sawmills cannot make a living and shingle mills operate at a loss.

THESE MATTERS MUST CAUSE great concern, particularly in view of ever-increasing demands for high rates of pay, shorter hours and guaranteed annual wages, coupled with the fact that majority of the forest industries work force is employed either directly or indirectly in the operation of sawmills.

We can exert no control over two factors, namely, a decline in price and volume in the export market on which we depend for about one-half of our production and a rise in freight rates to deliver our lumber.

One can only envisage a serious curtailment in our forest industry until our export selling prices will show some profit over our cost of production.

Such a large proportion of the cost of lumber today is represented by wages both in the woods and in the mills that one is forced to the conclusion that the immediate future of the lumber industry is, to a great extent, in the hands of organized labour.

Pressure Treatments Listed

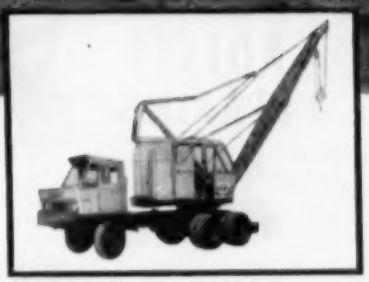
• A new handbook of specifications for pressure treatment of western woods is available for distribution throughout the west, according to The American Wood Preservers' Institute, Portland, Oregon.

This is the first time a specification book devoted exclusively to western woods has been issued in the pressure treating field. It is designed for use by architects, engineers, builders and others using this type of lumber and timber.

low-cost, mobile

BANTAM

puts more profits in scattered loading jobs



BANTAM owned by Dale Moore loading long logs in a hurry in Montana pine and spruce country, near Belgrade.

Handles other woods and road work, too!

The easy traveling, fast-loading carrier-mounted BANTAM has proved the ideal rig for making thinnings and salvage pay important financial returns. It's doing it here—with fast, one-man automatic loading of 40 to 70 long logs per load!

Lowest-cost loader of its kind, BANTAM has all the special features for putting more profit into this work. It's highly mobile . . . the carrier is built by Schield Bantam exclusively for the shovel-loader and the work! BANTAM is fast working with smooth, rapid cycle and instantly responsive, trouble-free mechanical controls. There are no wasted motions with a BANTAM. You pick up . . . swing . . . and spot loads swiftly, effortlessly —to cut down on truck waiting time.

Built to travel *and take* the toughest off-road conditions, BANTAM pays extra profits all year for owners by working with any of 9 fast-change attachments to handle construction and maintenance of access to roads, improvements, etc. BANTAM has ample 6- or 7-ton capacity for lower-cost handling of the wider range of jobs. BANTAM operating and maintenance costs are the lowest you will find. See your BANTAM distributor or mail coupon.

SCHIELD Bantam Co.

WORLD'S LARGEST PRODUCER OF TRUCK CRANES AND EXCAVATORS

283 Park Street, Waverly, Iowa L-71

☐ Send full information on carrier-mounted BANTAMS for logging and other work.

☐ Also crawler models.

Name _____

Position _____

Company _____

Address _____

City _____ State _____

British Columbia Lumber Markets Down

IN A COMPREHENSIVE REVIEW of the selling prospects for British Columbia's vital lumber industry, H. A. Renwick, president of British Columbia Lumber Manufacturers Association, details some of the reasons for a down-turn in the market for products of coastal sawmills.

Dealing first with the United Kingdom market, Mr. Renwick said:

"During recent years B. C. coast mills have exported approximately 25% of their coast lumber production to United Kingdom.

"Until recently 30% of U.K. present consumption of *softwoods* went into the manufacture of wooden cases.

"The use of substitutes for wood is making great inroads into the container trade there as it has done during the last two decades on this continent.

"We must be eternally vigilant with regard to the end-use of our sawn lumber. Substitutes of high quality are making greater inroads every year.

"Forecasts of U.K. requirements are difficult. In December the United Kingdom gold and dollar reserves had declined $279 million during the preceding month, and certain drastic steps had been taken to sustain the pound at its current level.

"Currently we are competing mainly with Britain's traditional suppliers — Sweden, Finland and Russia—which countries trade in sterling. Any serious devaluation of the pound would practically close the British market to us.

"We have been doing a great deal to retain and expand this market through trade extension programmes sponsored and financed by our member mills co-operatively."

In the rising cost of ocean freighting Mr. Renwick sees an additional problem for British Columbia's forest industries.

"The world freight situation since Suez has made it still more difficult to trade in off-shore markets, which are for us chiefly long haul markets," Mr. Renwick said. "The short haul markets are not large consumers of lumber, with the exception of U. S. Atlantic.

"Here our usual water shipments cannot compete with U. S. Intercoastal rates which are considerably below our second alternative—rail shipment.

"During the 11 months of 1956 U. S. housing starts are down 16½% from the same period in 1955.

"Federal Housing Authority (U.S.) rates on mortgages have been increased to five per cent but it is considered unlikely that this rate of interest will attract sufficient mortgage money to finance a buoyant house building program. It is house building that makes or breaks our lumber market. Selling our "big stuff" in timbers is no great problem; it is a very small percent of our overall production. Seventy per cent of lumber consumed is used in construction.

"On the Canadian market recent freight rate increases on lumber and those currently impending will further restrict our trading area. This applies to all our rail trade.

In British Columbia WORLD CONDITIONS DICTATE OUR TRADING AREAS AND OUR PRICES. WE CANNOT PUT A PRICE TICKET ON OUR LUMBER HERE. Approximately 40% of our production must move to markets by water and over 70% of our present volume of production must be shipped out of Canada."

EASY ON SAWS!

WHELAND ROLLER BEARING BAND MILLS

Right Hand 6' Wheland No. 45 Roller Bearing Band Mill

OPERATORS: At the present high price of stumpage, you can pay for your Wheland Band Mill with what you save on sawdust!

MORE LABOR SAVING FEATURES

Smooth running. Fast sawing. Long, trouble-free service. Sizes for every mill: 54", 6', 7' and 8'. Furnished either right or left hand. Better built—by the pioneer who first developed Roller Bearing Band Mills—and who continues to lead the field!

BULLETINS ON REQUEST

THE WHELAND COMPANY

CHATTANOOGA, TENNESSEE—PHONE AMherst 5-3181

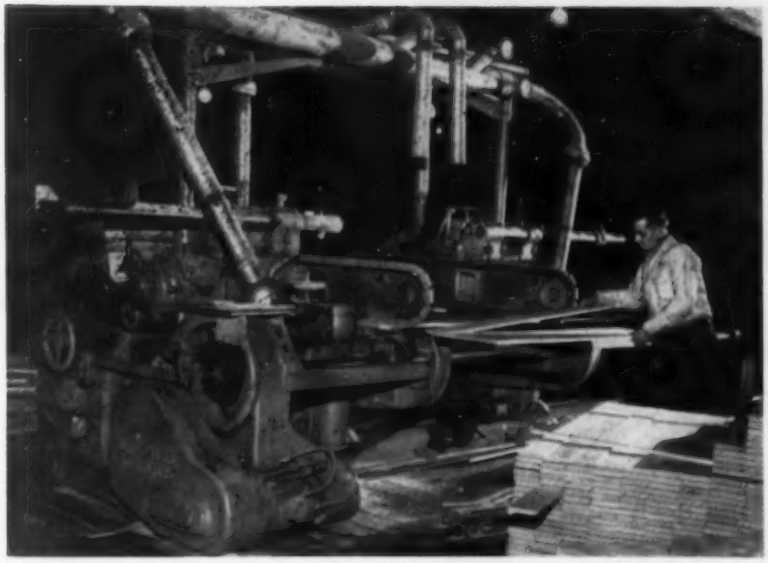
MANUFACTURERS OF COMPLETE SAWMILLS AND AUXILIARY MACHINERY

Kiln-Drying Demonstration Scheduled by Lab.

• The U. S. Forest Products Laboratory will hold its 81st Kiln-Drying Demonstration on April 1-12, in Madison, Wisconsin.

These demonstrations have been conducted since 1919 to help the wood seasoning industry by making Laboratory findings available.

The subjects covered in the demonstration include the basic principles of air drying and kiln drying, types of dry kilns, kiln equipment, kiln operation and tuneup, and moisture control during storage and production. Special emphasis will be placed on improved kiln-drying methods that can significantly reduce kiln time and seasoning degrade.



VIEW OF OUTFEED end of Greenlee double-end tenoner operating in plant of Oregon Lumber Co., Baker, Oregon. Machine is fitted with window frame attachment. Tubular members seen above, to right and left, can be moved into place to support steady bearing or top hold-down shoes, as need may appear. (Photograph courtesy Greenlee Bros. & Company, Rockford, Illinois.)

How Double-End Tenoners Work

DESIGN OF A DOUBLE-END tenoner follows that of a single-end machine in some degree. Obviously, so far as basic design of main tenoner cutterheads is concerned, with applications of their spurs and main tenoner knives, the double-end machine follows the single-end unit. The same basic principles must be and are followed so far as the nature of the cut made by coping cutters is concerned; also trim saws, employed to trim tenons to length. Many other points of correspondence could be cited, but it is nevertheless true that *overall* design of the double-end tenoner, which can and usually does machine both ends of workpieces at the same time, differs greatly from the single-end unit.

In a limited sense, it might be considered that a double-end tenoner really consists of two, opposed, single-end machines, with suitable arrangements for moving one of the two units toward and from the other, as different length requirements manifest themselves. Precisely at this point, in fact, is where trouble has arisen with some double-end tenoners made in the past, especially in regard to length accuracy.

However, some of the more modern machines, like those made by Greenlee, can maintain length tolerances as near as a small fraction of a sixty-fourth of an inch. If it were permissible to use the terms of the metalworker, it would be correct to say that accuracy as close as five thousandths of an inch can be held.

Heavy structural design is required in the frame of a machine where tolerances are to be held this close, particularly when it is considered that a double-end tenoner frame is subjected to all working shocks coming from six or eight cutting heads. If one is considering door rails, for instance, which are tenoned and coped on both ends, four main tenoner heads are required for coping alone, in addition to the coping heads.

Apart from actual tenoning and coping work, these machines are capable of receiving several different types of attachments, which have been developed to make them more versatile. Attachments with which a particular double-end tenoner will be fitted usually depend on the particular kind of plant in which the machine is used, in respect to kinds of work to be processed, and consequent modes of operation involved.

Dadoing work is performed, either with stationary or jump dadoing units. Scoring is performed when desired, and dovetailing attachments (of the type which cut a single dovetail groove across one surface of a piece of stock) are used in different plants. Notching, relishing, and window-sill horning may be and are advantageously accomplished in different places. Even irregular shaping attachments are available, allowing edges or ends of work to be shaped as they are passed through the machine.

Pine Mills Expand Kiln-Drying Facilities

• Kiln-drying capacity of Western Pine association lumber mills has been increased by 57 percent since 1949 to a present high of nearly 17,500,000 board feet daily.

The survey, third in a series started 13 years ago, showed virtual doubling of kiln capacity since 1943 in the 12-state Western Pine region.

The new study disclosed kiln facilities today to accommodate nearly 71 percent of the record high annual regional lumber production of 8,658,000,000 feet. The 1949 survey showed kiln servcie for 59 percent of a total production of 6,660,000,000 feet, while in 1943 the capacity was 55 percent of a regional lumber output of 5,797,000,000 feet.

Holding capacity of Western Pine sawmill kilns, based on lumber of four-quarter thickness, rose from 36,453,000 feet in 1943 to 44,703,000 feet in 1949 and 69,967,000 feet today.

On a four-day drying schedule for four-quarter lumber, the daily kiln output figure for the region's association mills was 9,113,000 feet in 1943, 11,176,000 feet in 1949 and 17,492,000 feet now. The region's kilns now in operation can turn out enough seasoned lumber daily to load 550 railroad cars—more than five long freight trains.

The total yearly kiln-seasoning capacity for the region increased from 3,189,550,000 feet in 1943 to 3,911,600,000 feet in 1949 and 6,122,200,000 feet today.

The remaining 29 percent not provided for in kiln capacity includes the substantial volume of air-dried lumber produced in the region. Excellent air-drying conditions prevail in most Western Pine localities.

While the survey covered association member mills only, it amounted to virtually total regional coverage since association membership accounts for more than 85 percent of the region's production and there are fewer kiln-drying mills outside the association than ever before. The survey showed dry-kilns operating at 243 of 380 plants covered.

Lumber Stamp System Used

• United States lumber mills whose sales are handled by Pack River Tree Farm Products, Spokane, Wash., are installing machinery to do double-end trimming, waxing and stamping of lumber, according to W. F. Stewart, general sales manager.

The lumber will be end-stamped with the name "Pack River Qualitized".

Mills using the stamping are Pack River Lumber Company, Sandpoint, Idaho; Northwest Timber Company, Coeur d'Alene, Idaho, and Thompson Falls Lumber Company, Thompson Falls, Mont.

THERE'S A LUBER-FINER MODEL FOR EVERY TYPE OF ENGINE FOR EVERY TYPE OF OIL!

Model 750-C

Model 200-S

Model 135-S

Model 78

Model 500-C

Models F-155 F-120

Models 272-C 363-C

Models 750-2C 750-3C

ONLY A GENUINE Luber-finer PLUS A GENUINE LUBER-FINER PACK

CAN GIVE THE EXCLUSIVE PATENTED FILTERING PROCESS THAT HAS MADE LUBER-FINER THE Standard Of The Industry Since 1936

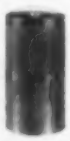
MODELS 78, 135-S, 200-S, featuring single-bolt lid, screw-in type pack, and overall compact design for use where space is limited. These Models provide the ultimate in filtration for passenger cars, small trucks and tractors, and other similar engines up to 5-quart, 6-quart, and 7-quart crankcase capacities.

MODELS 272-C and 363-C, featuring the Luber-finer single-bolt lid clamp, O-Ring lid gasket, screw-in type pack, and rugged construction throughout. Designed for heavy-duty service on gas, gasoline or diesel engines up to 3-gallon and 4-gallon crankcase capacities.

MODELS 500-C and 750-C, featuring the Luber-finer single-bolt lid clamp O-Ring lid gasket, large-capacity packs, and extra rugged construction to withstand the most severe service. Designed for use on gas, gasoline or diesel engines up to 5-gallon and 8-gallon crankcase capacities. Also widely used on fuel lines, hydraulic oil systems, and many other industrial applications.

MODELS 750-2C & 750-3C, featuring the Luber-finer single-bolt lid clamp, O-Ring lid gasket, and multiple packs for extra large capacity. Available with either wall or floor mounts for industrial use on engines up to 35-gallon sump, fuel lines up to 15 GPM, hydraulic oil systems up to 450 gals. For larger capacities, two or more Units can be connected in parallel.

MODELS F-120 and F-155, for gasoline and diesel fuel lines on mobile, stationary, or marine applications. Extremely efficient in removing impurities and contaminants from fuel. Single Units will handle flow rates from 0.5 to 1.0 GPM on suction or gravity flow. For larger capacities, connect two or more Units in parallel, or install on pressure-side of fuel pump.



GENUINE LUBER-FINER PACKS available in two types...

DIESELPAK — Expressly designed and recommended for use with all detergent-type compounded oils. Has the ability to remove the most finely dispersed contaminants without removing or affecting the additives.

REFINING PACK — For use on straight mineral oil, synthetic oils, diesel fuel oil, hydraulic fluids, etc.

★ THERE IS A GENUINE LUBER-FINER MODEL FOR PASSENGER CARS, TRUCKS, TRACTORS, STATIONARY AND MARINE ENGINES, HYDRAULIC OIL SYSTEMS AND MANY INDUSTRIAL APPLICATIONS.

WRITE FOR COMPLETE INFORMATION TO DEPT. 403

LUBER-FINER, INC. 2514 S. Grand Ave., Los Angeles 7, Calif

Log & Lumber Prices

Columbia River Log Prices

Douglas Fir Peelers: No. 1 $112-117; No. 2 $103-108; No. 3 $87-92.
Douglas Fir Sawlogs: No. 1 $68-73; No. 2 $57-62; No. 3 $49-54.
Hemlock: Peelable $63-68; No. 1 $55-60; No. 2 $43-48; No. 3 $40-45.
White Fir: Peelable $65-70; No. 1 $57-62; No. 2 $46-51; No. 3 $42-47.
Noble Fir: Peelers $62-67; No. 1 $53-58; No. 2 $40-45; No. 3 $35-40.
Cedar: No. 1 $60-65; No. 2 $43-48; No. 3 $41-46.
Spruce: Select $97-102; No. 1 $77-82; No. 2 $55-60; No. 3 $34-39.

Grays Harbor Log Prices

Dougls Fir Sawlogs: No. 1 $78-83; No. 2 $98-103; No. 3 $78-83.
Douglas Fir Peelers: No. 1 $108-113; No. 2 $77-82; No. 3 $2-47.
Hemlock: Peelable $57-62; No. 1 $50-55; No. 2 $40-45; No. 3 $38-43.
Cedar: No. 1 $88-93; No. 2 $47-52; No. 3 $34-39.
Spruce: Select $88-93; No. 1 $63-68; No. 2 $45-50; No. 3 $42-47.
White Fir: Peelable $57-62; No. 1 sawlogs $51-50; No. 2 $40-45; No. 3 $38-43.

Puget Sound Log Prices

Douglas Fir Peelers: No. 1 $110-115; No. 2 $102-107; No. 3 $86-91.
Douglas Fir Sawlogs: No. 1 $65-70; No. 2 $56-61; No. 3 $46-51.
Hemlock: Peelable $53-58; No. 1 $50-55; No. 2 $44-49; No. 3 $41-46.
White Fir: Peelable $55-60; No. 1 $52-57; No. 2 $45-50; No. 3 $40-45.
Noble Fir: Peelable $75-80; No. 1 $57-62; No. 2 $45-50; No. 3 $40-45.
Cedar: No. 1 $86-91; No. 2 $51-56; No. 3 $37-42.
Spruce: Select $85-90; No. 1 $60-65; No. 2 $42-47; No. 3 $38-43.

• Douglas Fir Plywood

¼" AD SO1S .....$72/M sq. ft.

• Red Cedar (industry standard) Shingles

Royals			
No. 1	24"	4/2	$15.50
No. 2	24"	4/2	9.50- 10.50
No. 3	24"	4/2	5.00
Perfections			
No. 1	18"	5/2¼	12.00
No. 2	18"	5/2¼	7.25
No. 3	18"	5/2¼	3.50
Hexes			
No. 1	16"	5/2	10.25
No. 2	16"	5/2	5.25
No. 3	16"	5/2	3.50- 4.00

• Douglas Fir Lumber Prices

1x8	Utility S4S KD	$ 55- 60.00
2x4	Construction Dimension S4S KD	84- 86.00
1x4	C&Btr VG Flooring KD	170-175.00
1x6	C&Btr Drop Siding KD	158-163.00
1x6	C&Btr S4S KD	170-175.00
1x8	C&Btr S4S KD	170-175.00
1x10	C&Btr S4S KD	175-180.00
1x12	C&Btr S4S KD	215-220.00
	CONSTRUCTION Timbers and Plank	
3x12	6x20'	$ 84- 87.00
3x12	22x24'	89- 92.00
3x12	26-32'	97-102.00
4x4	8-20'	85- 88.00
4x4	22-24'	90- 93.00
4x4	26-32'	98-103.00
6x6	8-20'	81- 84.00
6x6	22-30'	88- 91.00
6x6	32-40'	103-106.00
8x8	8-20'	81- 84.00
8x8	22-30'	86- 89.00
8x8	32-40'	101-104.00
6x10, 8x10, 10x10, 12x12	8-20'	81- 84.00
6x10, 8x10, 10x10, 12x12	22-30'	86- 89.00
6x10, 8x10, 10x10, 12x12	32-40'	101-104.00
Crossties		58- 61.00
	CONSTRUCTION Dimension (Green)	
2x4	6-24'	$ 70- 73.00
2x6	6-24'	71- 74.00
2x8	6-24'	70- 73.00
2x12	6-24'	71- 74.00
	STANDARD & Btr. Boards (Green)	
1x4	6-20'	$ 51- 54.00
1x8	6-20'	65- 68.00
1x12	6-20'	65- 68.00

British Columbia Log Market

Reported by C. D. Schultz & Co., Ltd., Vancouver, B. C., consulting foresters and engineers.

FIR—Log stocks down considerably, demand still constant on good Coast logs and weak on the lower grades. Price range $55.00 to $65.00 on No. 3's, $65.00 to $75.00 for No. 2's, and $75.00 to $85.00 for No. 1's. Peeler price range $85.00 to $95.00 for No. 3's, $95.00 to $105.00 for No. 2's, and $105.00 to $115.00 for No. 1's.

CEDAR—Log stocks down slightly, demand fair. Price range unchanged at $35.00 to $45.00 for No. 3's, $45.00 to $55.00 for No. 2's, and $65.00 to $75.00 for No. 1's. Lumber Cedar price range $55.00 to $65.00 for No. 2's, and $65.00 to $75.00 for No. 1's. Tie Cedar price range $35.00 to $45.00.

HEMLOCK & BALSAM—Log stocks down, demand weaker. Hemlock price range still $40.00 to $60.00 for No. 3's, $45.00 to $55.00 for No. 2's, and $50.00 to $60.00 for No. 1's. Balsam price range $40.00 to $50.00.

• Western Pine Prices

The following F.O.B. mill prices, based on Past Sales, were reported to the WESTERN PINE ASSOCIATION by members during the period 1-21 to 2-2-57 inclusive. Both direct and wholesale prices are included and are based on specified items only. They are for dry surfaced lumber.

PONDEROSA PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
C Select RL	$270.43	$267.02	$264.16
D Select RL	199.80	211.16	201.49
SHOP S2S	No. 1	No. 2	
5/4	135.36	102.29	
6/4	136.47	102.90	
COMMONS S2 or 4S	No. 2	No. 3	
1x8" RL	100.77	72.34	
1x12" RL	113.05	74.90	
4/4 No. 4 Common S2 or 4S	55.00		

IDAHO WHITE PINE

SELECTS S2 or 4S	4/4RW	6/4RW	
Choice (C) RL	276.10	292.50	
Quality (D) RL	201.47	263.60	
	Colonial	Sterling	Stand.
COMMONS S2 or 4S	No. 1	No. 2	No. 3
1x8" RL		151.88	100.10
1x12" RL		164.36	100.43
4/4 UTILITY (No. 4) S2 or 4S RW&L	60.00		

SUGAR PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
No. 1 & 2 Clear RL	289.65	282.59	283.82
C Select RL	278.93	276.03	274.72
D Select RL	226.99	211.18	221.36
SHOP S2S	No. 1	No. 2	No. 3
5/4	142.42	107.05	73.62
6/4	148.46	107.36	74.06
8/4	163.37	118.97	72.68

LARCH-DOUGLAS FIR

4/4 No. 3 Common S2 or 4S	$61.13
2x4 No. 1 Dimension RW&L	84.03
2x4 No. 2&Btr. Dimension RW&L	70.87

• Southern Pine Prices (KD Stock)

Vertical Grain Flooring

	BB	C	D
1x4	230.00	215.00	160.00

Flat Grain Flooring

1x4	160.00	150.00	120.00
1x6	175.00	165.00	125.00

Drop Siding

1x6 No. 106	191.00	170.00	130.00
No. 116	191.00	170.00	130.00

Boards & Shiplap

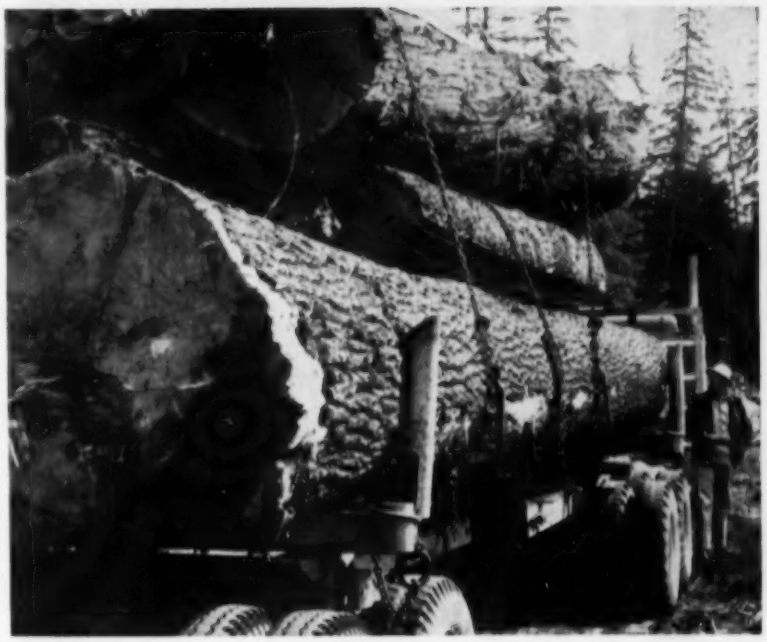
	1x6	1x8	1x10	1x12
No. 1	125.00	125.00	125.00	175.00
No. 2	85.00	88.00	82.00	93.00
No. 3	71.00	75.00	74.00	74.00

No. 1 Dimension

	12	14	16	18	20
2x4	100.00	100.00	102.00	118.00	123.00
2x6	100.00	103.00	101.00	115.00	120.00
2x8	97.00	96.00	96.00	115.00	120.00
2x10	108.00	108.00	108.00	120.00	125.00
2x12	125.00	115.00	115.00	145.00	150.00

No. 2 Dimension

2x4	94.00	96.00	98.00	107.00	113.00
2x6	90.00	92.00	90.00	100.00	105.00
2x8	87.00	85.00	85.00	97.00	105.00
2x10	87.00	93.00	87.00	105.00	109.00
2x12	90.00	85.00	87.00	115.00	120.00



THIS LOAD WILL STAY PUT OVER ANY LOGGING ROAD!

WIRE ROPE LIFE, SAFETY INCREASED WITH THIMBLES

Unless protected with an adequate thimble, wire rope can be seriously damaged by heavy loads that crush the strands at the load points. A light thimble can collapse and weaken the rope. For complete rope protection and safety, specify Crosby-Laughlin heavy plow steel thimbles with the extra heavy steel section design that stands up under maximum loads. Plow steel thimbles are manufactured in sizes to fit all wire rope up to 2¼". Stainless steel thimbles are available in selected sizes.

To keep their loads tied down with absolute security—even on the roughest roads—safety conscious loggers and truckers use Lebus Loadbinders. They know that, from handle to hooks, it's the strongest loadbinder manufactured. Completely drop forged, then heat treated for even more strength and long life durability, the millions of Lebus Loadbinders already in use have proved their ability to tie down loads of every description—keep them positively secured without failure *until released!*

Equally important is the convenience and safety of operation offered by Lebus. Once the binder is locked in position, it can't snap open—even shifting logs won't spread the handle!

Exclusive Lebus designed ball and socket swivel is drop forged—won't pull apart regardless of the load! You're assured of safe performance because *every* Lebus Loadbinder is fully tested to rated capacities before shipment. Your nearby Crosby Laughlin Lebus Distributor has complete specifications on logging's number one loadbinder—see him!

World's Most Complete Line of Fittings For Wire Rope and Chain

CROSBY LAUGHLIN LEBUS

FORT WAYNE 1, INDIANA

turns logs on the fly

KLAMATH MACHINE
Single Arm
LOG TURNER

The KLAMATH MACHINE Single Arm LOG TURNER can be installed in any mill *regardless of head room.* Sawyers develop the skill to turn logs on the fly . . . Available in standard or heavy duty construction with 8", 10" or 12" push arm cylinder . . . Does not deface upper grades of lumber with its quick acting, accurately controlled hook. Entire unit mounted in self-contained steel frame. Improvements in controls have been searched out and developed over many years of operation.

SAWMILL INFORMATION

Our new CATALOG illustrates our full line of sawmill machinery, including the Log Turner. This CATALOG will be sent to responsible sawmill operators on request.

Representatives in Washington, Montana and Northern Idaho: AIR MAC, Inc., 3838 Fourth Avenue South, Seattle 4, Washington and AIR MAC, Inc., E. 3710 Trent Avenue, Spokane 10, Washington.

KLAMATH MACHINE & LOCOMOTIVE WORKS INC.
P. O. BOX 908 • KLAMATH FALLS, OREGON, U. S. A.
Look for the Indian Head on all **KLAMATH MACHINE** *products*
Export Division: FRAZAR & HANSEN, Ltd., 301 Clay Street, San Francisco 11, California, U. S. A.

Hardwood Research Slated

• Research designed to tap six billion board-feet of hardwoods now standing unused in California forests is getting underway at the University of California Forest Products Laboratory at Richmond, Calif.

California tan oak, black oak and Pacific madrone, along with certain minor species, are being tested for basic mechanical and physical properties and for their gluing, drying and machining characteristics.

The Laboratory's hardwood program reflects increased interest by California timber producers as well as a need for new sources of hardwood by the state's furniture makers and other users, said Fred E. Dickinson, director of the 21-month-old facility at the Richmond Field Station.

As the program unfolds, all divisions of the laboratory will participate. Arno Schniewind, section leader in timber mechanics, will determine strength properties. Joseph E. Marian, recently-employed Swedish wood technologist, will test gluing properties. Arthur B. Anderson will experiment with new chemical processing methods. Eric L. Ellwood, an Australian scientist, will work on drying methods after his scheduled arrival February 1 to join the FPL staff.

Two Oregon Mills Plan to Add Barkers

• Two mills in the Coos Bay-North Bend, Ore., area are planning improvements, including installation of barkers.

Georgia-Pacific Corp. plans to install a 60-inch barker at its Bunker Hill sawmill by April 1, and Menasha Plywood Corp. will install a similar barker at its North Bend plant about May 1.

Menasha Plywood Corp. also plans to construct a barge dock. The dock area will be about 40 x 40 feet.

Other installations planned at Georgia-Pacific's Bunker Hill plant include a chip reloader, which will aid in shipping an expected surplus of chips when the barker begins operation. A new cinder and ash collector is to be installed during the second quarter of the year.

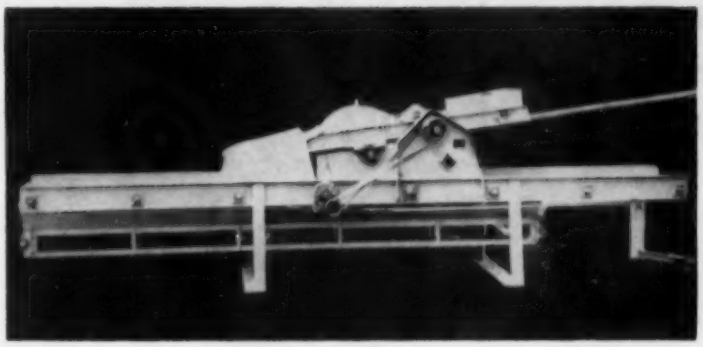
Seaport Campaign Launched

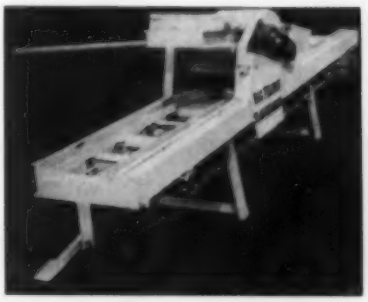
• Brookings, Oregon, is initiating a campaign to provide a seaport for southern Oregon at Brookings. The port once had a wharf, but lack of adequate port development by the U. S. Army Engineers resulted in only limited use. A federal grant for port development is now available and government recognition of its importance is being sought.

In 1954 it was estimated that there was an output of some 11,250,000 board feet per month of lumber from the immediate area. Water shipment to southern California is estimated to save considerable money to shippers.

THE WATKINS DEBARKER

Proven in two years operation. Debarks both slabs and edging strips. Takes slabs up to 14" wide by 7" thick. Variable feed from 0 to 120-ft. per minute controlled by foot pedal. Simple in design and operation, requires one operator. Infeed, outfeed and bark conveyors built onto machine. Specially designed debarking head fits contour of slabs, less chain wear and cleaner peeling.





Capacity 1¼ to 2 cords per hour with 20 HP.
Price without power $4950.00 F.O.B. York, Ala.
Write for details and delivery to

Price Subject to Change Without Notice

SUMTER MFG. CO.

YORK, ALA.

The Smaller Mill Can Be a Better Mill — MOORE *Cross-Circulation* Kilns Make The Difference!

Even though your drying needs may be as small as a few thousand feet of lumber per week, there is a Moore-Kiln designed to fit your budget and your operation.

If you do not now have kilns, you owe it to yourself to investigate the Moore System. It will cost you nothing to find out how you can obtain all of the advantages of modern kiln drying —let us give you complete facts, specifications and prices—no obligation!

Norman Johnson Kiln at Sausalito, Calif. Economical automatic oil fired boiler heats kiln. Since picture was taken a second kiln has been installed.

Write us today for your copy of Bulletin 5301. It features Moore Cross-Circulation lumber kilns, roller veneer dryers and lumber handling labor saving equipment.

MOORE DRY KILN COMPANY

Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

JACKSONVILLE, FLORIDA · BRAMPTON, ONT. CANADA · VANCOUVER, B. C. CANADA · NORTH PORTLAND, OREGON

SPEAR & JACKSON

Circular SAWS

If you are interested in saws that cut two to three times as much lumber—sorry we can't help you!

But if you are interested in cutting well manufactured lumber with trouble-free saws—that's where we come in.

By locating our factory at Eugene, Oregon, close to the center of the lumber industry, we can offer direct factory - to - mill service in custom - made saws—good saws made on the Pacific Coast.

SPEAR & JACKSON

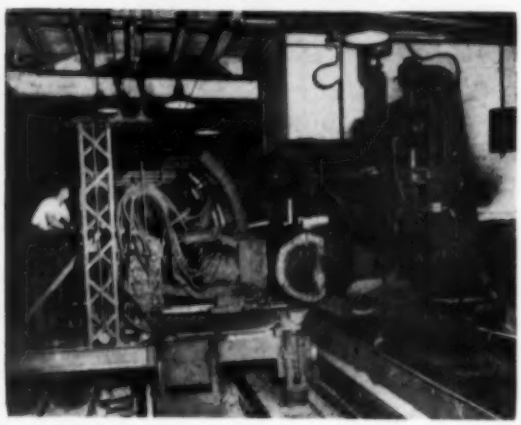
EUGENE, OREGON

Band, Gang, Circular Saws, Teeth and Holders

"The Saw Without a Flaw"

We Can Improve YOUR Mill Operation

EXISTING EQUIPMENT CAN BE IMPROVED TO MODERN STANDARDS BY WELL ENGINEERED REBUILDING



This photograph shows the new carriages recently furnished by Klamath Iron Works and one of three old style band mills that was completely modernized for a large pine mill in eastern Oregon.

The Klamath Iron Works has the engineering and plant facilities and knowhow to aid you to modernize your present plant facilities.

Let Us Tell You About This

Original designers and builders

KLAMATH IRON WORKS

P.O. Box 129, Klamath Falls, Ore.

Representatives:

United States Machinery Co., New York, N. Y.
Washington Mach. & Supply Co., Spokane, Wash.
Electric Power Equipment Ltd., Vancouver, B.C.

KLAMATH IRON WORKS

Edge & End-Gluing Process

(*Continued from page* 45)

as next charge comes in, moves onto chain transfer taking it to curing room. It remains here for at least four hours at 70° temperature to set finger-joint glue (Borden). Hold-down pressure is applied at four to six psi. and end-edge pressure at 110 psi.

• Panels are ready for shipment "as is" or for remanufacturing at planing mill. Generally they are ripped to 24-in. width and then S2S processed by a surfacer.

The glue-up plant, including cut-up section proper, operates with an 11-man crew, including foreman and millwright. Gluing and preparation of cut stock have been carried on alternately.

Flexibility Pay Off

(*Continued from page* 58)

works motor, which operates on DC provided by a Republic Electric motor-generator set.

LUMBERMEN FROM ALL OVER the Inland Empire district have come to Colville to take a look at the Arden mill. A large per cent of all euipment was either built or modified by the mill crew to fit specific needs, including the log hauls, conveyor systems, circular headrig, remote control carriage and pantograph, edge sorter and the trimmer in the planing mill.

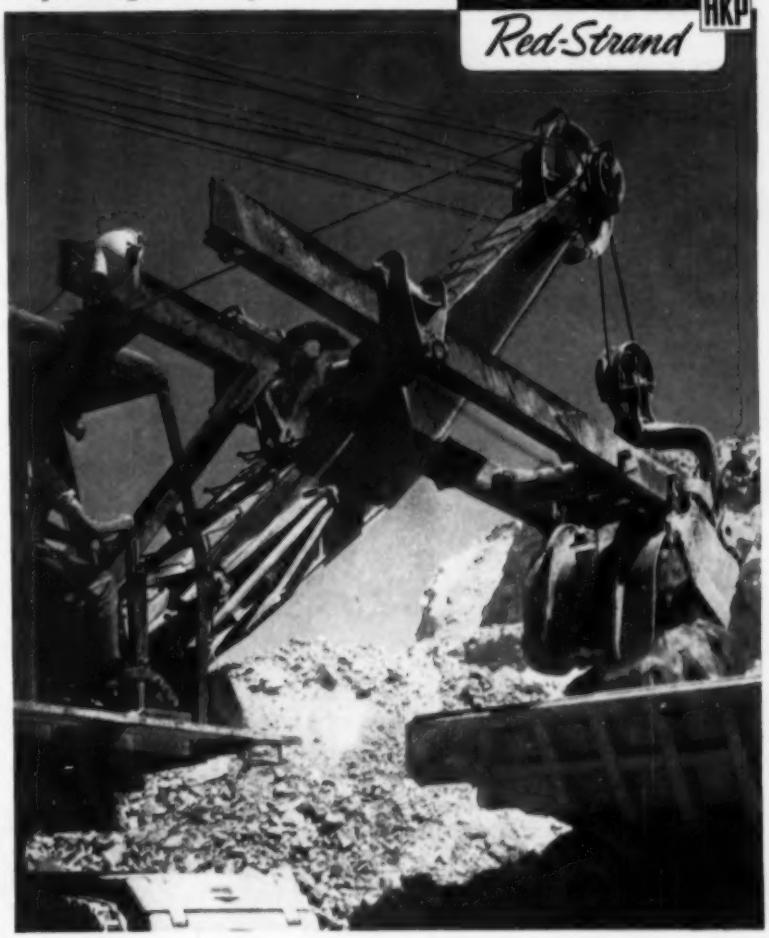
The Corley two-saw trimmer in the sawmill has an overhead handle (See picture), attached to a friction drive that moves both saws at once in opposing directions. This replaces the original crank drive.

Arden Lumber Co. is a four-man corporation composed of two brothers, Hugh and Maynard Rodenbough, and Jim Keeley and Roy Botham. The brothers handle the sawmill end of the business while Keeley and Gotham keep watch on the timber and log supply. The mill cuts public timber in addition to a considerable volume of company-owned timber. All logging is contracted at the present time.

The Rodenboughs told THE LUMBERMAN that everyone who had seen the new mill has been surprised at the efficient layout, minimum of handling and the quality lumber produced. Lumber sales are handled through various brokers.

Miles Owens, millwright, has had charge of all mill construction, and has worked with Maynard Rodenbough for 10 years. Mr. Rodenbough has many years experience in sawmilling, logging, lumber hauling and lumber sales work. He believes that small mills such as Arden Lumber Co. must continue to strive for more efficient production of a good-looking, saleable product or eventually go out of business.

Improving wire rope service with LESCHEN HKP *Red-Strand*



How to prove wire rope performance for yourself

There is a difference in wire rope—in types, in constructions, in brands. And using the right rope every time can easily reduce rope costs by 10% to 20% or more.

How do you know which rope is right? First, get good advice. Leschen field men, distributors and Leschen's engineering department can help you make the best choice. Second, prove it out with easy-to-use Leschen Service-Score stickers. They tell you right on the job how you're doing—help you make accurate comparisons.

Keep the score—see the results—and you'll use more Red-Strand Wire Rope. See your Leschen man or write Leschen Wire Rope Division, H. K. Porter Company, Inc., St. Louis 12, Missouri.

Leschen engineering advice and Service-Score Stickers are yours for the asking. Write for fact-folder.

HKP LESCHEN WIRE ROPE DIVISION
H. K. PORTER COMPANY, INC.

Great Gains Seen By 1957 for Oregon

Oregon's forest industries are expected to add more than a quarter of a billion dollars to their annual output by 1975, but it won't take many more trees from the state's forests than it does today.

J. B. Grantham, managing director of the Oregon Forest Products laboratory, predicts value of the state's forest products will amount to about $1,252,000,000 by 1975. That is an increase of $276,000,000 over 1954, latest year for which complete information is available.

Most of the increase will come from the big users of wood residues—pulp, paper and wood composition board industries. However, improved manufacturing methods will also add to productivity.

Grantham expects the pulp and paper industry to boost its output 83 percent, to $266,000,000. Wood composition boards, including softboard and hardboard, would be up 50 percent, to $30,000,000.

The Oregon plywood industry is expected to increase its output by 40 percent, to an annual value of $270,000,000. Lumber production, which accounts for more than half of the value of Oregon's forest products, would increase 12 percent, to $675,000,000. Only decreases would be in shingles and miscellaneous products.

This added value could mean some 27,600 new jobs by 1975, Grantham estimates. Even with automation, about 20,000 new jobs would be created.

He notes use of wood residues in Oregon grew from 1500 tons in 1944 to 860,000 tons in 1954. This figure is expected to double by 1975.

Despite this increased use, Grantham says about 12,000,000 tons of residues are available annually that can be better utilized.

The OFPL is concentrating its efforts on use of residues, particularly on chemical utilization of bark, high-yield pulping of mill leftovers, barking and chipping of logs in the woods and on seeking ways to use sawdust and bark in agriculture.

The forest products laboratory, located at Oregon State college, is a state research agency, supported mainly by a timber harvest tax.

BLUE BABE Products
NORTHWEST MARINE IRON WORKS PORTLAND OREGON

BLUE BABE
HYDRAULIC VENEER CLIPPER

A pressure arm and foot, hydraulically operated, is made on the pantograph principle which assures even pressure the entire width of the stack. Movable end and pressure plate hydraulically actuated. All mechanical movements controlled by one operator from console.

A BLUE BABE CLIPPER recently installed at the Campbell and McLean, Inc. mill at Eugene. Sold by Munnell & Sherrill also of Eugene.

See your dealer or write direct for additional information.

NORTHWEST MARINE IRON WORKS
DESIGNERS OF SAWMILL AND LOGGING EQUIPMENT
2516 N. W. 29th AVE. Industrial Division PORTLAND, OREGON

Scholarships Announced

• The National Lumber Manufacturers Association will award special scholarships again in 1957 to outstanding college students majoring in wood technology or wood utilization.

At least four scholarships, and possibly five or six, will be awarded, depending on the number and qualifications of candidates. Deadline for nominations is March 15.

Each scholarship will carry a cash payment of $500, travel expenses and ten weeks' on-the-job training in wood products research at the Washington, D. C., laboratory of the Timber Engineering Co., NLMA's research affiliate.

Mill Modernization

(*Continued from page* 64)

lubricating system for spraying oil on the arbors.

Result: More accurate sawing, less maintenance and down time, and closer log utilization. Other improvements to be made include modernization of dry kilns and further improvements in the plant's transport facilities.

Company Personnel

GENERAL MANAGER: *Freeman Schultz.*

ASSISTANT GEN. MGR.: *Charles M. Kreider.*

PLANT SUPT.: *Hans Slagsvold.*

SAWMILL SUPT.: *Joe Francis;* SHIPPING SUPT.: *Eric Dunlap;* PLANING MILL SUPT.: *Ted Meagles;* POWERHOUSE SUPT.: *F. G. Gates;* PLANT ENGR.: *Douglas W. Dron;* MASTER MECHANIC: *B. V. Anderson.*

Your Customers Will Demand *Quick Service*

Winter Construction and Repair Business requires Spot Shipments from Mills with ample diversified stocks.

Our production has been steady and our inventories are well balanced.

We can supply your mixed car needs in SUGAR PINE, PONDEROSA PINE, DOUGLAS FIR, WHITE FIR, CALIFORNIA INCENSE CEDAR and a limited amount of PORT ORFORD CEDAR in 4/4 and 8/4 high grade commons.

Pine Mouldings can be included in your mixed car

The Ralph L. **SMITH** Lumber Company

Mills at Anderson, Red Bluff, Castella, Wildwood, and Mt. Shasta, California

Sales Office at Anderson, California

THE EFFICIENT WAY TO MOVE

PULP CHIPS · HOGGED FUEL · SHAVINGS · SANDER DUST

RADER

PNEUMATIC CONVEYORS

RADER PNEUMATICS INCORPORATED

1739 N.E. 42ND ST. PORTLAND 13, ORE.

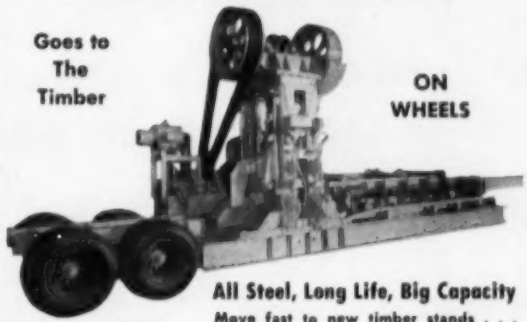
Modernize Your Mill Operation with GUNDERSON BROS.

Production Boosters!

Gunderson semi-portable sawmills and gang mills give you the same efficient, profitable operation as big mills. Gunderson all-steel sawmill equipment is designed for today's conditions —saves time, labor and timber waste . . . speeds up production, lowers operating cost.

SEMI-PORTABLE GANG SAW

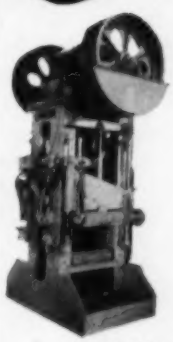
Goes to The Timber



ON WHEELS

All Steel, Long Life, Big Capacity

Move fast to new timber stands . . . level up trailer frame with timbers and start cutting . . . no special foundation needed. Big Mills: Keep small logs out of your big mills . . . save trucking costs with a Gunderson Semi-Portable Gang Saw!

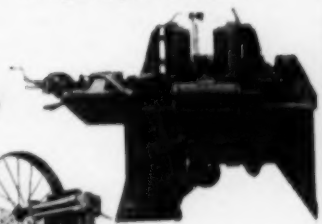


as a Stationary **GANG SAW**

- Accurate; rugged; saws logs or cants. Cuts 8' logs without extra attachment.
- Variable hydraulic feed works . . . speed 0' to 30' per minute.
- Special attachment available for cutting 2 logs at one time.

Cost-Cutting Lumber Salvaging

CIRCULAR RESAW



Recovers profitable board feet from every log. Gauge and Bevel Sawing, center splitting. Up to 250 lineal feet per min. Use as an Edger.

Complete Sawmill Planning and Engineering Service

Vertical BAND RESAW

- Accurate Gauge & Bevel sawing . . . Center splitting.
- Instant Setting.
- All-steel Pressure Bar Feed Table and Feed Rolls, or
- with Tilt Table & Quadrant Set Works.

All Equipment Available on a Lease-Rental Basis

Write for Illustrated Literature and Complete Information.

GUNDERSON BROS. ENGINEERING CORPORATION

Steel Fabricating Division

4700 N. W. Front Avenue

Portland 8, Oregon

NO STRAIN OR PAIN in moving camp with these 28-foot mobile bunk houses. Each trailer measures 28 feet long, sleeps five.

NOT MUCH DIFFERENT than stationary cook houses is this trailer, equipped with ranges, freezers and refrigerators and hot water heaters.

30-Man Camp on Wheels Keeps Close to Logging

Trailer homes save much time in transportation to and from Idaho logging job

ANOTHER EXAMPLE of the progressiveness of western loggers is found in the use now being made of mobile camp buildings in the operations of the MacGregor Triangle Co., Boise, Idaho. Last summer Gordon MacGregor, president and manager of the MacGregor Triangle Co., put into service six factory-built Nashua Mobilhome trailers.

This camp on wheels consists of bunk houses, shower house, cookhouse and shops. Each bunkhouse has five bunks. Each unit is 28 feet long. Thirty men can be housed in the camp.

Experience with the Nashua Mobilhome trailers shows that their extreme mobility provides advantages not found in the ordinary camp. The camp can be moved easily and frequently and kept close to the actual logging operations, so that there is no waste of time in getting men to and from work. About the only limitation on mobility is the fact that the buildings should be located near a supply of potable water. In most areas this is not a problem.

Not only do the bunkhouse trailers have most of the characteristics of home trailers, but the cook house has all the facilities of a regular stationary cook house including ranges, freezers and refrigerators. Butane gas is used for heating water for the showers, laundry and other camp purposes. There is an oil circulating heater in each unit. There are plenty of cabinets, lockers and sinks.

Another unit is the mobile shop which was built separately. This shop contains all the euipment neded to make ordinary repairs. It has power drills, grinders and compressor and has a good assortment of tools and parts commonly needed.

MacGregor Triangle Co. is one of the best-known contract logging companies in the west. It supplies logs to the Boise-Payette Lumber Co., Boise, Idaho. The mobile camp described above is operating in the Boise National Forest, Sage Hen Sale. It is located northeast of the company's big mill at Emmett. The logs are truck-hauled some fifty miles.

The Nashua trailers are manufactured by the Nashua Manufacturing Co. which has six factories, two of which are in the west, one at Boise, Idaho, and one at Tulare, California. It also has factories in the South.

Lumber Survey Started

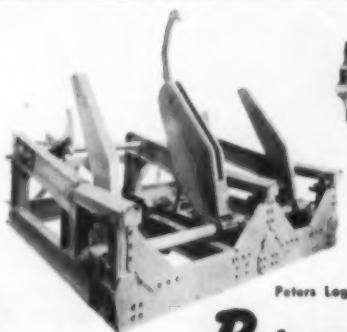
• A survey of the production of lumber and other forest products in California during 1956 has been started by the California Forest and Range Experiment Station of the U. S. Forest Service.

The lumber production survey will be conducted in cooperation with the U. S. Bureau of the Census. The experiment station will canvass all sawmills in the state, and both agencies will use the information for their reports.

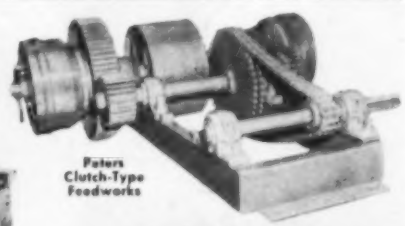
The station will also collect information on timber cut for such other forest products as veneer logs and bolts, pulp logs and bolts, poles, fenceposts, and mine timbers.

LARGE MILL...
SMALL MILL...

Peters Sawmill Machinery is Custom Engineered to meet your needs



Peters Log Deck



Peters Clutch-Type Feedworks

Peters Precision Carriage

THE Peters CO.

1933 S. E. UNION AVE. - PORTLAND, ORE. - BE 2-5146

Profit with PETERS Performance

For solid, year around comfort at unmatched low price, it's...

NASHUA

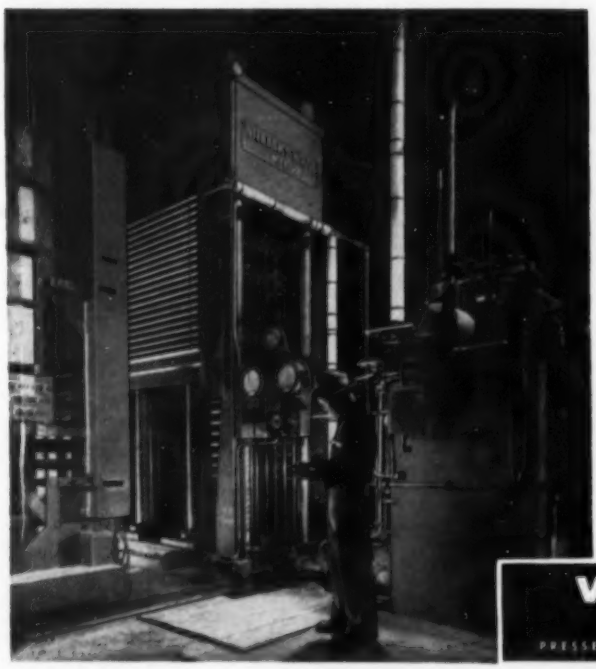
Quality-built for year around comfort regardless of climate, Nashua gives you all the convenience of home wherever you are. Nashua is an "Eastern-built" mobilehome, yet two of Nashua's six factories are located in the West. This means big freight savings for West Coast buyers. Add freight savings to Nashua's low, low FOB price and truly you have "The Lowest Price Anywhere for a Quality Mobilehome." Five models to choose from. Get all the details today. See your Nashua dealer or write, wire or call factory nearest you.

NASHUA MANUFACTURING

Kansas City 16, Mo. Cave Rd. & Hwy. 169—Route 12 Dept. 3L Phone GL 2-5800	Macon, Ga. 1205 Hightower Rd. Dept. 3L Phone 2-7344	Wichita Falls, Tex. 1020 Vermont Dept. 3L Phone 2-7839	Boise, Idaho Route 4—Gowen Field Dept. 3L Phone 2-5651	Montoursville, Pa. 304 Streibeigh Dept. 3L Phone Williamsport 8672	Tulare, Calif. Route 4, Rankin Field Dept. 3L Phone 6-3437

WILLIAMS-WHITE HOT PLATE PRESSES

for Continuous Production

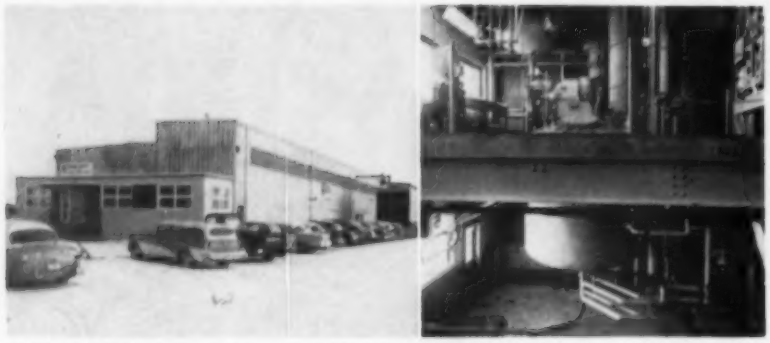


The machine illustrated is typical of Hot Plate Presses for bonding plywood designed and built by WILLIAMS-WHITE & CO. in capacities from 50 to 5,000 tons. Each is engineered to your specifications. Take advantage of our designing and building "know-how." For details, write any of our representatives or direct to WILLIAMS-WHITE & CO.

REPRESENTATIVES

ALLIED NORTHWEST MACH. TOOL CORP., Portland, Ore.
GEORGE A. DAVIES, JR. MACH. CO., Los Angeles, Calif.
PERINE MACHINERY AND SUPPLY CO., Seattle, Wash.
WILLIAMS-WHITE & CO., 53 W. Jackson Blvd., Chicago

WILLIAMS-WHITE & Co.
310 EIGHTH ST. • MOLINE, ILLINOIS
PRESSES • BULLDOZERS • BENDERS • PUNCHES • SHEARS



TOUGH PRAIRIE winter weather prompted design of Canadian Marietta's new resin and adhesive plant at Edmonton, Alta., which is completely enclosed. Loading from rail cars is accomplished inside to keep chemicals from freezing. This plant embodies the latest in chemical manufacturing technology. Heart of the plant is the chemical reactor, right above. In this vessel temperature and pressure and moisture are precisely controlled in the reaction of various chemicals. This view is rare; ordinarily the reactor would be sealed off and impossible to photograph. Stainless steel construction permits manufacture of urea formaldehyde in addition to conventional phenolic resins.

Expanding Canadian Inland Industry Is the Basis For Canadian Marietta Ltd.'s New Edmonton Plant

• Top company officials were on hand Jan. 8 when the new $500,000 Canadian Marietta adhesive and resin plant opened its doors in West Edmonton, Alberta.

Included in the number who welcomed visitors and showed them the plant's facilities were Robert Pflaumer, president, American Marietta; Grover Hermann, board chairman; L. E. Flick, production manager, Seattle; A. W. Hendry, general sales manager, New Westminster; and Don Redfern, general manager, adhesive, resin and chemical division of A-M, Seattle. The new plant is part of the western network of American Marietta plants, which includes facilities at Seattle, Portland and New Westminster, B. C.

The plant is geared to meet the needs of the current construction boom in the prairie provinces. All but one of the chemicals required by the plant are supplied by Edmonton producers.

Synthetic resins and adhesives are important components in the plywood and rock and glass wool industries. They also go into the manufacture of straw and particle boards and allied products. One of the new plant's customers is the recently-opened Western Plywood Co., located practically next door.

Rail facilities have been built right into the 200-foot long plant. This is to prevent chemicals, loaded in tank cars, from freezing during wintertime operations.

The present production capacity of the plant is 2,000,000 pounds of resin and adhesive a month.

C. R. Roop is plant superintendent in charge of production. John Carpenter is sales repr. for the Edmonton area.

Joe Denton Due Honor

• Joe Denton, sawmill engineer for Filer & Stowell Co. at Portland, Ore., has been made a candidate for United Air Lines "Million Mile Club."

Mr. Denton began flying on commercial airlines in 1936. Since that time he flew around the world and made a number of side trips to points in Africa and Europe.

When Mr. Denton recently ordered a ticket to Manila, P. I., at the Portland airport, airline officials went to work and totalled up the amount he had spent over a period of years. United Air Lines discovered he had spent over $500,000 just on that airline alone.

Mr. Denton's first flight was in one of the old Boeing 207 ships on an emergency trip from Portland to Vancouver, B. C. Now he says, "I'd take a plane for any point farther away than Vancouver, Wash." (Just over the state line from his home in Portland.)

United said that Mr. Denton would be given a special placque following a current trip—by air.

Earthmoving Equipment Field Beckons LeTourneau

• Robert G. LeTourneau announces his firm will re-enter the earthmoving industry in 1958, after a five-year absence.

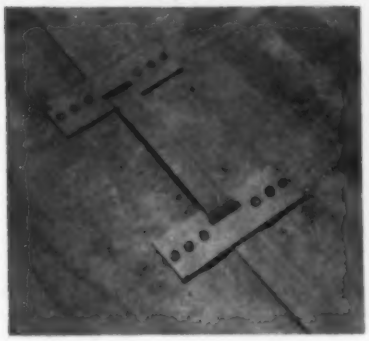
His firm, R. G. LeTourneau, Inc., of Longview, Texas, built 70 per cent of all earthmoving equipment used by the armed services in World War II. Mr. LeTourneau holds some 250 U. S. patents in his name and is credited with a large share of the basic design fundamentals used by earthmoving manufacturers today. Also he has received many national honors for contributions to the industry.

The new euipment will be marketed under the new trade mark: "ARGEE". In discussing his plans to reenter the earthmoving field, Mr. LeTourneau made reference to the sale of his earthmoving business to Westinghouse Air Brake Co. for $31-million four years ago. Included in the sale was an agreement that his firm would refrain from building and selling earthmoving euipment for a period of five years, ending May 1, 1958.

Maximum Power Per Pound

NEW LIGHTWEIGHT TITAN—J. Craig Huff, Jr., general sales manager, Titan Chain Saw Co., and its BlueJet Chain division, demonstrates the new Titan Model 50. Other Titan executives are (l to r) F. M. Culver, asst. sales manager; Robert W. Hanson, chief engineer; and Arthur H. Young, general manager. Engineered for ease of handling, light weight and power, the Titan 50 has its sprocket at right center for better balance. Compact tank and engine housing aid its efficiency and complete-circle handle bars aid. Titan officials say the direct-drive Titan 50 will have maximum power per pound. Specifications: height, 13½"; width, 13⅜"; length, 16¼"; bar lengths, 16-18-20-25 and 31"; Penfield Speed-Ply Wear-Tough bars; Blue Jet ½" or 7/16" pitch chains; chain speed, 2500 fpm at 5000 rpm.

New Products & Services



Plates Control Loads

IT IS NOW possible to control floating loads in box cars with nailable steel flooring by means of the new Model NSFB Mechanical Brakeman Plates developed by Signode Steel Strapping Co. Used with heavy duty steel strapping and nailed to the floor in pairs, they dissipate shocks which would otherwise be transmitted to the load. Forward and backward movements caused by impacts and creeping caused by vibration of the cars are reduced to a minimum. This is accomplished by braking friction as strapping is drawn through the slot in the plates under impacts.

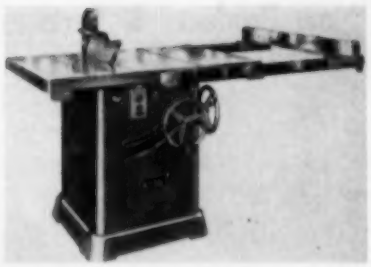
S.F. Bay Firm Offers Electric Motor Repair

• "Big job" electrical motor repair has been a feature of Star-Delta Electrical Works, San Francisco, for nearly 40 years. The firm is now re-entering the lumber field.

Henry Berringer, one of the founders and now retired, worked with lumber and plywod manufacturers in northern California and southern Oregon before World War II, servicing and repairing motors, generators and conrtols. During the war years, however, and for some time since, the firm worked almost entirely on defense and industrial repair and installation in the San Francisco Bay Area.

The firm's present "team" of motor, generator, controls and electronics specialists includes Al Speers, foreman, with Star-Delta for the past 27 years; Vic Manecks, who has worked with Speers rebuilding motor generator sets for the elevator industry for the past 26 years; Eric Gauglitz; Dorsey Behringer; Jack Bonner; and partner-owners Maurice Antoine and John Geary.

"We expect to reestablish our reputation in the lumber industry on the basis of quality workmanship and materials and the 'know how' of the members of this organization," say Messrs. Antoine and Geary.



Attachment for Newman Saw

NOW OFFERED for the Newman K-16 precision tilting arbor saw is a new attachment which provides for accurate ripping up to 48 in. wide. This attachment is a micrometer box type rip fence with rack and pinion adjustment. This fence adjustment control engages both the front and rear guide rails. Rotation of control crank moves both rails simultaneously and carries fence in perfect alignment with saw (at any setting) from 0 to 48 in. Scales are provided for accurately setting fence on either side of saw. The K-16 has a cast iron base and column, a direct motor drive with 5 hp motor and is equipped with a 16 in. saw blade which projects 4 in. above the table at 90° and 2½ in. at 45°.

'Buzz' Is New Hoe Salesman

• "Buzz" Hoe, a pen and ink caricature made up of saw parts, recently developed by the Saw Division of R. Hoe & Co., to symbolize and promote Hoe's many and varied products for the wood-cutting and processing industries.

Swing-Shift
HYDRAULIC FORK CONTROL
SAVES YOU 18%
in Operating Costs
SIDE SHIFT
BOTH FORKS
SWING AND SHIFT
AUTOMATIC
A. C. (BUDA)
CLARK
GERLINGER
HYSTER
ROSS
YALE & TOWNE
NOW!
FACTORY OR FIELD INSTALLATION KITS
for 3000 to 20,000 lb. Trucks
Swing-Shift speeds carloading up to 28%. Less damage to loads and fragile merchandise.
SWINGS and SHIFTS loads quickly into exact alignment without moving truck from original approach.
Operator SWINGS and SHIFTS loads (forks) while truck is moving—eliminates all lost motion.
Swing-Shift MFG. CO.
P. O. BOX 111 - L

See Your Lift Truck Dealer or Write—

Jay Bee Industrial Grinder Model W — 60 to 200 H. P. Separate fan motor means all the power of the mill motor goes into grinding.

Turn your wood waste into PROFIT with a JAY BEE Industrial Grinder

JAY BEE

Get your share of the ready market for commercial sawdust and wood flour! The Jay Bee Model W Hammermill will grind hard or soft wood scrap, sawdust, or shavings into any degree of fineness. Used profitably for years by Frank Miller & Sons., Chicago; Rock Island Mill Work Co., Rock Island, Ill.; Woodward Walker Lumber Co., Taylor, La.; and others throughout the country.

For complete information, write

J. B. SEDBERRY CO., INC., Franklin, Tenn.

New Products & Services

Many Advanced Features On Clark's New Yardlift

• Power brakes, power steering and finger-tip directional control are standard on a new 8000 lb. capacity, pneumatic tire fork-lift truck, the Yardlift 8024, now available from Industrial Truck Division, Clark Equipment Co.

With four speeds in each direction, the truck will travel 16½ mph forward and 16 mph reverse and climb a 21 per cent grade loaded.

Water, fuel and hydraulic filler caps are outside the engine for quick access. Major engine components are easily reached through hinged side louvers covering the engine. An engine hour meter, ammeter, oil pressure gage, fuel and temperature gages, ignition switch and starter button are all mounted in a panel on the steering column.

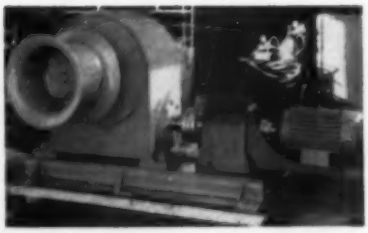
Lift speeds are 48 fpm empty and 42 fpm loaded. The axle mounted telescopic upright tilts four degrees forward and 12 degrees backward. An automatic "tilt-lock" valve prevents upright drift. Length is 132 inches, and width 77 inches. Turning radius is 134¾ inches, wheelbase 86 inches.

Saw Package Saves Time

• A new individual package for circular saw blades has been designed and is now being produced by Henry Disston Division, H. K. Porter Co., Inc.

The outstanding feature of the new envelope-type container is a cut-out window which shows the style of tooth, thus no need to open package as is usually done.

The package also tells and shows various style blades that Disston manufactures.



Unit Moves Chip Barge

RECENTLY INSTALLED at Van Vleet Lumber Co., Rainier, Ore., is this new Western Machinery corp. barge mover. This unit is driven by a 5-hp 1800 rpm electric motor, which in turn drives a Falk Motoreducer at 230 rpm output. The Motoreducer is coupled to a worm gear reducer with a Falk Steelflex coupling Size F. The gypsy mounted on the low-speed shaft of the worm gear reducer rotates at 6.76 rpm, giving a line speed of 21.25 fpm. This barge mover moves regular river barges forward and backward during the loading of chips which are then transported on the Columbia river to the pulp division of Weyerhaeuser Timber Co. at Longview, Wash. The barge is hooked to the barge mover by means of an 1" or 1¼" manila line which is wrapped around drum hooked to the opposite end of the barge.

How Capacity Is Increased On Variable Speed Motors

• New "Slo-Speed" gear motors (as shown above) and "Speed-Trol" variable speed motors with reducer have just been developed for severe radial load duty by Sterling Electric Motors, Inc.

This is accomplished through extended bearing construction on the speed reducer. The distance between bearings on the output shaft has been lengthened, thus increasing both radial load capacity and rigidity. Ratings now available, and others on the drawing board, will complete the line through 15 horsepower. All standard AGMA speeds are furnished from 350 rpm through 20 rpm in both constant and variable speed models.

Complete details on applications, load capacity, frame size and dimensions for Speed-Trol motors and also for Slo-Speed gear motors are available, along with price lists, from Sterling Electric Motors, Inc., 5401 Telegraph Road, Los Angeles 22, Calif.

Many ingenious applications are now possible because this new innovation minimizes the need for secondary support bearings.

1 TO 600 H.P. A.C.

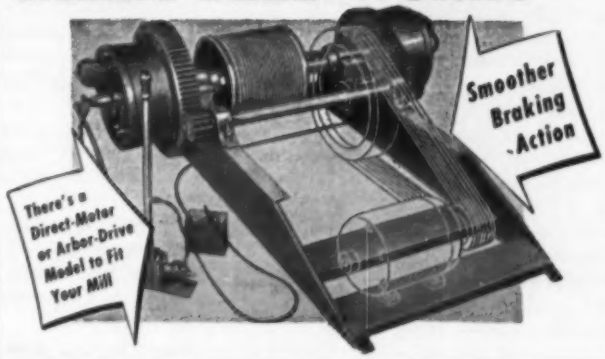
BROOK MOTOR CORPORATION

SINCE 1904

world's most respected motor

3553 W. PETERSON AVE. CHICAGO 45, ILL.

SALEM FEED WORKS



Write for circulars about:

Salem band mills • Salem scrag mills • Salem air cylinders
Salem edgers • Salem carriages, etc.
Proven profitable for many years.

NOW IS THE TIME TO GET STARTED FOR A MORE EFFICIENT MILL FOR 1957.

Contact us or write for the name of the Dealer nearest you.

Salem Equipment & Supply Co.

Earl R. Hitchman, Pres.
3455 D Street • Salem, Oregon
PHONE EMpire 4-4737

KENWORTH TRUCKS

☆ SALES
☆ SERVICE

ROBERTS MOTOR COMPANY

123 N. E. PACIFIC STREET • PORTLAND, OREGON

Phone BElmont 4-6661

Now! Portalloy rubber covered camel back chain for use in selective transfer handling

Special Non-Marking White Rubber Is Used To Eliminate Bruising • The Rubber Is An Integral Part of Chain

ask for details about this chain, and all Portalloy standard chains . . . also rubbber covered rolltop

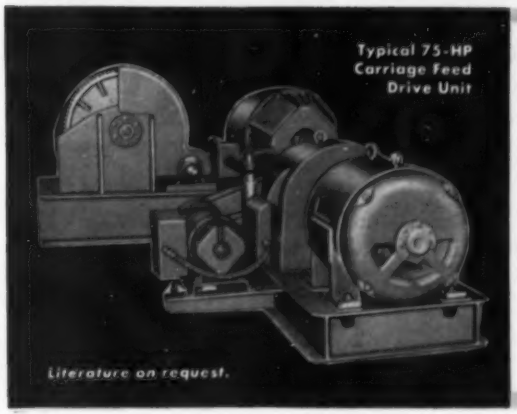
NOT AN ATTACHMENT

- WILL STAND TOUGH WEAR
- ELIMINATES DOWN GRADING
- COMES IN STANDARD H-78, H-130 AND H-138 CHAIN ON THE FAMOUS PORTALLOY STEEL QUALITY CHAIN

PORTLAND CHAIN MANUFACTURING CO.

IN THE HEART OF THE LOGGING INDUSTRY

4000 N.W. Yeon • Portland, Oregon • CApitol 8-9219



ELECTRIC DRIVES

Install a Quality-Built D.C. Feed . . . Designed for Rugged Service & Trouble-Free Performance. Backed by a one-year Zidell Guarantee.

For Carriages, Feed Roll Systems, Veneer Lathes, Tray Systems, Conveyors, Machine Tools, Etc.

ZIDELL MACHINERY & SUPPLY CO.

3121 S. W. Moody St., Portland, Ore
CA 8-8691

New Products & Services

INSTALLED on a lumber-carrying trailer, the aluminum rolls increase pay-load by some 3500 lbs.

Aluminum Proves Successful

• Reduction in weight and increase in pay-load capacity has resulted from replacing steel with aluminum in the fabrication of lumber rolls for transport trucks and trailers at the H. B. Rubens Welding and Machine Shop, Sacramento, Calif.

Aluminum rolls provide a weight reduction over steel of approximately 3500 pounds per set. In the case of extra-heavy steel rolls, aluminum offers even greater reduction.

The first set of aluminum rolls was put in service in late 1954 and is still in excellent condition. Users are now installing them on additional trucks and trailers.

In the argon-shielded fabrication, Rubens uses a portable manual sigma welding outfit with drawn aluminum rod. This rod has a lower melting point and wider solidification range than pure aluminum or any of its alloys and also contracts less during cooling.

Lumber Yards Purchased

• Retail lumber and building materials yards owned by the Hammond Lumber Company in Los Angeles county, Calif., have been purchased by J. W. Copeland Yards, Portland, Ore.

Saw Chain Line Improved

• A complete new line of improved, longer-lasting chains for gasoline-powered chain saws is now available from McCulloch Motors Corp.

Leading feature of the chains is the pintail design, which reduces chain "rear-back" action and results in smoother, faster cutting.

All stress points have been double-quenched for maximum resistance to abrasives and shock wear. The chrome-plated cutter teeth will hold their sharp edge longer between sharpenings.

Chains are available in four sizes: P-9, designed for all heavy-duty production saws; P-8, for all geared, one-man saws; P-8N, which cuts a narrow kerf, and is recommended for lightweight geared saws; and P-65, which is designed for McCulloch's new direct-drive saw, the D-44.

The pintal chains have been field-tested for over two years.

J. W. MINDER CHAIN & GEAR CO.

Portland, Ore.: 307 SE Hawthorne, Phone BE 6-1131 Los Angeles 1, Calif.: 6011 S. Central, Phone AD 3-7221

Everything for the Mechanical Transmission of Power

Dodge Mfg. Corporation - Moline Malleable Iron Co. - Timken Roller Bearing Co. - U.S. Electrical Motors - Hewitt-Robins, Inc. - Morse Chain Co. - U.S. Rubber Co. (Timing Drives) - Ohio Gear Co.

ALSO OUR COMPLETE MACHINE SHOP SERVICE

REDUCE COSTS with STETSON-ROSS

STETSON-ROSS MACHINE COMPANY
SEATTLE 4, WASHINGTON

Learn How a SEL-SET Setworks can Automate Your Mill for More Production at Less Cost

Write or Call

Forest Products Machinery, Inc.

Salem 3-3123

P. O. Box 1035 Salem, Oregon

Metal Detector — Save Machinery

Stop The Accident Before It Happens

SCR-625 ARMY MINE DETECTOR

Recommended by U. S. Forestry Service and in numerous articles for finding concealed metal in logs and timber products. The Dautzler Lbr. Co., Perkinston, Miss., reports an estimated savings of $5,000 to $6,000 yearly. Write us for copy of free report of U. S. Forestry Service.

The SCR-625 is a portable instrument which may be used in the field to give an audible indication of buried metal in logs, underground, or in water. It may also be connected permanently with suitable automatic control devices for stopping machinery should imbedded metal in logs be encountered.

Detector is shipped in handy portable carrying case with instructions and ready to operate except for batteries. Ship. wt. 55 lbs. Our recent Government surplus purchase allows the present low price of $79.50 ea.
Batteries, per set—$6.27

We maintain service and parts of the SCR-625. Parts price list on request.

ESSE RADIO COMPANY

42 W. South Street Indianapolis 25, Indiana Phone: Melrose 4-8328

News of Suppliers

- **Promotions**
- **Appointments**
- **Plant Expansions**
- **Mergers & Acquisitions**

• Halton Tractor Co. has appointed ***Ernest Whitehead*** as territory manager specializing in industrial and marine Caterpillar diesels. He'll cover all Halton's area out of the Portland, Ore., headquarters. He has 22 years experience in "Cat" diesel application and installation.

• Sumner Iron Works' new assistant general manager is ***Marion Fish,*** advanced from chief engineer. ***C. M. Riddell*** becomes chief engineer. Mr. Fish has been at Sumner for six years and has long experience in design and manufacture of machinery for the forest industries.

• New Salt Lake district manager in charge of sales of industrial products for Jeffrey Mfg. Co., Columbus, O., is ***Carl G. Schilbe.*** The 1953 graduate of Lehigh Univ. will work out of offices at 211 Utah Oil Bldg., 10 W. Broadway, Salt Lake City.

• Mater Machine Works, Corvallis, Ore., formerly a partnership, has incorporated and henceforth will be known as Mater Machine Works, Inc.

Appointed

DANIEL T. WETTA has been appointed manager for distributor sales for Kenworth Motor Truck Co., Seattle. Mr. Wetta has been with KW in sales work since '45. He is an ex-navy pilot.

Engineer

MARVIN A. RING, former instructor in civil engineering at Oregon State College, is now chief engineer for Mater Engineering, Corvallis, Ore. He has worked on many sawmill projects.

Heads Buda

L. C. DANIELS is now general manager of Buda Div., Tractor Group, Allis-Chalmers Mfg. Co., succeeding R. K. Mangan, retired. Mr. Daniels joined the former Buda Co. as v.p in 1950. A-C bought Buda in 1953.

40 Years

G. EDW. SCHLAVIN, a veteran of nearly 40 years in the lumber industry, has been appointed district sales representative for Ore. and Calif. for Monarch Forge & Machine Wks. Inc., Portland, Ore.

Milton H. Mater is president, ***Mrs. Jean Mater*** vice president.

• ***Raymond J. Lodge*** and ***Charles W. Smith*** have been appointed department general managers for the Borden Chemical Division. Mr. Lodge now heads up the resins and chemicals department, and Mr. Smith, the polycomonomer department. ***Eugene J. Sullivan,*** who had been top administrator for both departments, recently was advanced to general sales manager for the entire Chemical Division.

• Boise Payette Lbr. Co. of Emmett, Ida., recently took delivery of four ***Baier*** heavy duty boom boats. These boats have unusually heavy duty manual gears.

• ***Carl Romei,*** salesman in the Seattle branch, John A. Roebling's Sons Corp., has been named to new responsibilities in wire rope sales, announces A. R. Robinson, northwest manager.

Romei takes over sales activities formerly handled by Arthur Kolberg and will work in the city of Seattle, adjacent logging area and Alaska.

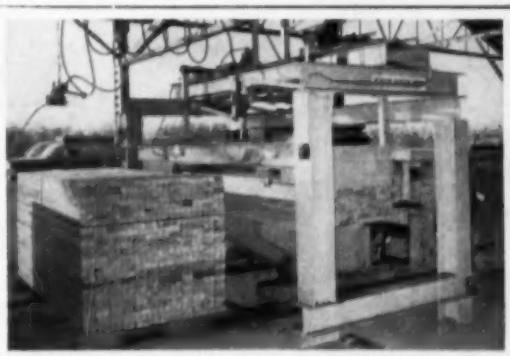
BLO-R-DRY

THE ECONOMICAL LUMBER DRYER

Manufactured and installed by Iron Fireman Manufacturing Company. Capacity from 140,000′ BM to half million per week. Can be shut down and re-started with no damage to the lumber. Fully automatic. Movable. Can be obtained on lease basis. Installed complete with building in 30 days. Total costs for purchasing or leasing with operation costs will not exceed $5.00 per M.

BLO-R-DRY, Inc.

GRAM DEVELOPMENT COMPANY
Portland Trust Building — Portland 4, Oregon
Phone: CApitol 8-9770



New type heavy duty 2 x 4 lumber stacker now being built by I. W. JOHNSON ENGINEERING CO. Very recent installations at Athens Mill Company, Athena, Oregon; and Elk Lumber Company, Medford, Oregon.

FINE Sawmill Machinery

Band Mills
Rolls, Skids • Resaws
Turners, 10" and 12"
Carriages, complete
Edgers, 6"-8"-10"-12"
Niggers, 8" and 10"
Shot Gun Feeds, 8"-10"-12"-14"
Trimmers, Automatic, Smooth End, etc.
Gears, Transmissions
Feed Engines, Straight Connected and Geared
Trout Type Power Setworks for Rack and Pinion and Screw Block Carriages

I. W. JOHNSON ENGINEERING CO.

Tacoma, Washington — Telephone: MArket 2217 or 2365

S. A. WOODS®
MACHINE COMPANY

WRITE FOR FOLDERS

PLANERS & MATCHERS
MOULDERS • BAND RESAWS • BLANKERS
GRINDING MACHINERY • END MATCHERS

1218 N.W. Glisan Street • PORTLAND 9, OREGON

News of Suppliers

Smith Joins Dodd Company

WILTON G. SMITH

• Wilton G. Smith has been appointed sales manager of the Robert Dodd Co., Portland, Ore., dealer for Clark materials handling equipment, announces Robert Dodd, president.

Mr. Smith has been in the materials handling field for eleven years. He has been a district manager, Washington representative and manager of the New York export office for Hyster. Recently, he has been the local dealer for Lewis-Shepard industrial trucks. He is a member of the American Materials Handling Society.

The appointment is a part of an expansion program, which includes a new $120,000 office and shop building in Portland serving Oregon and southwest Washington, and, in 1955, the establishment of a branch in Medford, Ore., serving southern Oregon and northern California.

Wood Tractor Moving

• Wood Tractor Co., Portland, Ore., area distributor for Allis-Chalmers logging and road-building machinery, is building a new $250,000 building at N. E. 82nd avenue and Killingsworth street to house sales, parts and service activities. Occupancy is expected in late March.

In addition to Allis-Chalmers, other lines handled by Wood include Insley shovel-cranes; Carco hoists, arches and drums; Schield Bantam shovel-cranes; Esco buckets and rigging; Skookum blocks and rigging; and Broderick & Bascom wire rope.

Chain Belt Promotes Two

H. F. BERGIS

• Chain Belt Co., Milwaukee, announces promotion of two men in its northwestern region. Under an expanded sales program, many changes have been made throughout the country. H. F. Bergis, formerly Portland, Ore., district sales manager, becomes northwestern regional sales manager.

Wilbur F. Church has been promoted from district sales engineer in the Portland office to district sales manager.

All Types of
LOGGING BLOCKS

All Types of
FORGINGS

Wide Variety of
FAIRLEADS

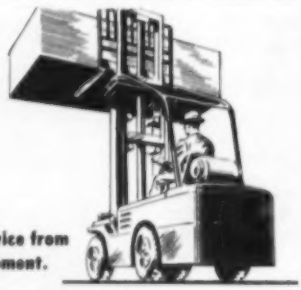
WRITE for Skookum Catalogs on all these!

We'll Build Anything in Blocks, Fairleads and Forgings.

The SKOOKUM-CO., Inc.

GET SURE LIFT-POWER ...with ECONOMY!

switch to Calor LP-GAS



... and get long, trouble-free service from your materials handling equipment.

You've heard of some of the remarkable advantages of LP-Gas for Fork Lifts. You get *instant starts, smooth idle,* and *full power when you need it*... with NO NOXIOUS ODORS! Not only are fuel bills less... but, major maintenance cost reductions are almost unbelievable. Let one of the *industry pioneers* give you the complete story and show you how the transition to CALOR LP-Gas will cost so little. *It's guaranteed to save you money in less than a year!*

If you're located in the West... MAIL THE COUPON for the name of your nearest CALOR REPRESENTATIVE.

FIND OUT ABOUT CALOR LP-GAS... *It's Natural!*

CALOR GAS COMPANY
114 SANSOME STREET · SAN FRANCISCO 4, CALIFORNIA
Telephone YUkon 2-3260
Serving Western America

CALOR GAS COMPANY
Room 731
114 Sansome Street
San Francisco 4, California

Sure, have a representative give us information on CALOR LP-Gas Service for internal combustion.

Name_____
Company_____
Address_____
City_____ State_____

EVER LOOKED CLOSELY at your SENTRY TRADEMARK?

The lonely foot soldier with the rifle is a well known figure to many of us . . . and so we've chosen him as a symbol for our equipment because we're doing 24-hour guard duty at your production line.

Whether you manufacture plywood, lumber, fibreboard or related products, you KNOW you're getting 100% inspection . . . and that any over-wet (or over-dry) material will be stopped BEFORE it can cause trouble.

So that's the idea behind the GI with the M-1 . . . and if you're not using him we'd certainly like to talk to you.

LAUCKS LABORATORIES, INC.
Manufacturers of
LAUCKS Sentry®
CONTINUOUS MOISTURE DETECTOR
1201 Poplar Place — Seattle
A Leader in Wood Technology for 49 years

Protect Your Tractor
Rollers Against Grease Loss

Sure-Seal®

ROLLER SEALS

Give Double Protection

Special inner seal expands when pressure lubricated, keeps grease from reaching bellows.

Sure-Seal Tractor Roller Seals have an inner seal in addition to the regular outer seal to lock dirt and moisture out and keep grease in. High pressure lubrication can't hurt Sure-Seals—it seals them tighter from the inside without strain on the bellows. Made for Caterpillar D-4, D-6, D-7, D-8, D-9, TD-14, TD-18 and TD-24. See your tractor dealer.

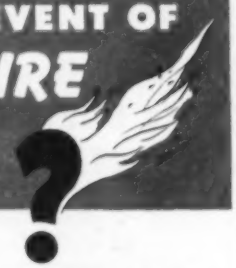
Locks Grease In—Dirt Out

Sure-Seal Equipment Co.

1820 N.W. 25th Avenue

Portland 10, Oregon

COULD YOU SUBSTANTIATE PROOF OF LOSS IN EVENT OF FIRE



You *can* with a GENERAL APPRAISAL! It is a factual record of all plant assets, showing insurable values as well as present and replacement values — *positive proof of loss.*

54 years of authoritative service

GENERAL APPRAISAL COMPANY

SEATTLE	SAN FRANCISCO
SEneca 6655	SUtter 1-2056
PORTLAND	LOS ANGELES
ATlantic 1-0095	TRinity 9631

BOB MADDEN SIG OLNEY

Air-Mac, Seattle, Takes on P&H Shovel, Crane Line

• Stanley B. McDonald, president, Air-Mac, Inc., of Seattle, Portland and Spokane, announces that the Seattle office now represents the complete line of shovels and cranes manufactured by the Harnischfeger Corp.

Bob Madden and Sig Olney, sales engineers of long experience with the P & H line, have joined the Air-Mac Seattle office in the Construction Equipment Division, along with Jim Ferguson and Austin Campbell who have been with this organization for several years.

Air-Mac, Inc., have represented P & H at Spokane for some time. With the Seattle appointment, their representation now covers all of Washington (except southwest counties bordering the Columbia River) and northern Idaho.

Air-Mac will offer complete sales, service and parts coverage on the P&H line.

Simonds To Open Branch

• A new warehouse, sales office and service shop will be erected in Shreveport, La., by Simonds Saw and Steel Co.

New branch will be located in Freestate Industrial Park and will serve as a distribution and service center for the surrounding nine-state area for the full line of Simonds products.

The new building is expected to be ready for occupancy by early spring.

MARTIN BROS. CONTAINER and Timber Products Corp., Sutherlin, Ore., began operating its new shook mill in late December. It will utilize number 3 and 4 grades of lumber, handling an expected 12 million bd. ft. yearly. Product made will be base and cleat material for boxes and crates, mostly industrial wire-bound boxes and fruit and vegetable wire-bound boxes and crates. In full operation, the plant will employ 22 persons.

schultz

FORESTERS • APPRAISERS • ENGINEERS • MANAGERS • SURVEYORS

COMPLETE FORESTRY
AND
ENGINEERING SERVICES

- COST ANALYSES
- LOGGING PLANS
- TIMBER CRUISES
- ROAD LOCATIONS
- MILL DESIGNS
- WORKING PLANS
- TIMBER MANAGEMENT

C. D. Schultz & Company Incorporated

White-Henry-Stuart Bldg.

Seattle, Washington

INDIAN

PORTABLE FIRE PUMPS

Are "Choice for Quality the WORLD OVER"

All Seams are Electric Welded — no leakage. Pump throws 30 ft. pressure stream or nozzle adjusts for spray. Strongly built — lasts for years.

USES ONLY CLEAR WATER

No chemicals needed. For over 30 years INDIAN FIRE PUMPS have been first choice for fighting grass, forest, building, roof, rubbish fires, etc. Insulated tank prevents dampness touching the back.

Fire Chief S. W. Griswald says: *"I cannot praise INDIANS highly enough. There is nothing else will match them."* Another chief says: *"They are worth their weight in gold."*

The INDIAN is also made with lever type pump and handle

Write for Catalog

D. B. SMITH & CO.

"Established 1888"

421 MAIN ST. UTICA 2, N. Y.

More and Better Lumber Is Aim of Wheland's New Line

• THE WHELAND CO., sawmill manufacturers with offices and plants in Chattanooga, Tenn., during the past few months have redesigned their line of sawmill equipment. The changes result in equipment which will lower lumber-producing costs and increase mill output.

Some of the redesigned and improved sawmill machines are as follows:

The new 8' roller bearing band mill is furnished with dust-proof construction throughout. It is built for either 12" or 14" wide saws. The band mill has a sturdy structural steel bed and heavy steel housing with doubly supported motorized top saw guide. This 8' band mill has a motor driven live lumber roll and is smooth-running and fast sawing. It is equipped with Wheland's patented straining device, spring loaded, for up to 20,000 lb. strain. Similar improvements have been made in the 7' mill.

The Wheland low mill air nigger and its companion item, the low mill log stop & loader, are built primarily for mills with little clearance between the ground line and headblock base. These machines are fabricated of steel and are quick-acting and easy to handle when powered by compressed air. To a large extent the machines come prefabricated. The stop & loader and nigger are suitable for mills where light carriages are used and logs vary in diameter up to about 24".

THE COMPLETE LINE of edgers with openings from 68" to 36" between the edger housing has been equipped with steel front and rear tables, steel and cast iron edger housings and anti-friction bearings on all shafts. An all-steel automatic rear edger table to eliminate the need of an edger tailer is available for all the edgers.

For sawmills and planing mills handling up to approximately 35,000 bd. ft. per day, Wheland can now furnish an automatic electric shift two saw trimmer.

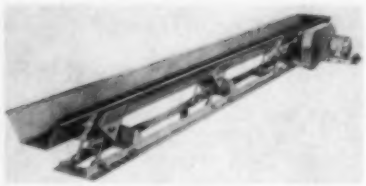
An automatic lumber sorter which sorts lumber completely for width, thickness, length and grade is built for specific desired separations. The sorter is constructed of structural steel plates, angles, channels and beams. It bolts together at point of installation. One man can handle and sort 50 to 75,000 bd. ft. per day in average sizes.

Other Wheland products redesigned are shot gun stem feeds, live rolls and overhead selective trimmers.

DETAILED BULLETINS on all of the new machines mentioned here are available from the manufacturer.

Wheland carriages are now being redesigned. They will have steel frames, air operated dogs, and either manual, air operated, or electrical remote controlled setworks and remote control systems for riderless carriages.

PETERSON-CLOUSE MOULDING CO. took delivery on a new Harris automatic dado and jamb stock machine and No. 19 Irvington automatic Cut-off. They will now offer specialty items in supplement to their moulding business.



Assembled Sections

"COILMOUNT" is Link-Belt's newest recent addition to its oscillating conveyor line for bulk materials handling, such as chips. Coilmount is especially engineered for applications in the intermediate ranges and capacities to augment and complement the light and heavy ranges of "Flexmount" and "Torqmount" conveyors for bulk materials handling. One piece all-metal construction reduces contamination, no return run eliminates carryover and smooth oscillation provides self-cleaning, careful handling, as well as leveling-out surge loads. Coilmount comes from stock in fully assembled sections of 5 to 10-ft. lengths, in trough widths of 10 and 20-in., in 10-gauge or 3/16-in. trough thickness. Sections can be assembled in lengths up to 100-ft.

New Hyster Color Film

• Hyster's "new" look in lift trucks, their Monomast single upright design development is the subject of an informative 10-minute 16-mm color and sound film. On-the-job scenes filmed at various types of industries around the nation show the Hyster "Space Saver" 30 and 40 Lift Trucks of 3000 and 4000 lbs. capacity on cushion tires and the Hyster 20 Lift Truck of 2000 lbs. capacity on pneumatics, all equipped with their Monomast upright assembly. Reservations to view the film without charge can be made through Hyster Co., 2902 N. E. Clackamas St., Portland 8, Ore.

GENERAL MACHINE and ENGINE WORKS

Gang Saws • Presses • Lumber Pilers
Hydraulic Rams • Crankshafts
Monitors • Tenoners • Special Machinery

JOHNSON MANUFACTURING CO.
Fox and Holly Sts. • Seattle 8, Washington

This Guide To Quality
MORTISING and BORING TOOLS
Is Yours For The Asking

GREENLEE

Write for Catalog 34-M today.
Contains complete information.

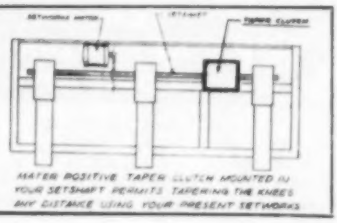
GREENLEE TOOL CO. 2173 HERBERT AVE. ROCKFORD, ILL.

***At Last!* PRACTICAL TAPER SAWING!**

Now you can taper forward or backwards any distance with the new MATER TAPER CLUTCH (patent pending). Easier to operate than an automatic gearshift on a car. Moves the Whole Knee. Returns knees into line automatcially.

Mater automatic sawmill equipment will help your mill increase productivity and profits. Inquire today!
Phone Plaza 3-5912

MATER MACHINE WORKS, INC. Corvallis, Oregon



MATER POSITIVE TAPER CLUTCH MOUNTED IN YOUR SETSHAFT PERMITS TAPERING THE KNEES ANY DISTANCE USING YOUR PRESENT SETWORKS

BUYERS GUIDE AND CLASSIFIED SECTION

List of companies supplying Machinery, Equipment, Supplies and Services used in the Forest Industries.

AIR CYLINDERS & VALVES
Caldwell Machinery Co., Portland, Ore.
Ledeen Mfg. Co., Los Angeles, Calif.
John M. O'Brien Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.
Salem Equipment & Supply Co., Salem, Ore.

APPRAISALS
General Appraisal Co., Seattle, Portland, San Francisco

ARCHES
Hyster Company, Portland, Ore.
Pacific Car & Foundry Co., Renton, Wash.

AXLES
Clark Equipment Co., Buchanan 8, Mich.
Eaton Manufacturing Co., Cleveland, Ohio
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

BAND WHEEL GRINDING
Wilder Saw Works, Fresno, Calif.

BARKERS, LOG
Sumner Iron Works, Everett, Wash.
Nicholson Manufacturing Co., Seattle
Soderhamn Machine Mfg. Co., Portland, Ore.

BEARINGS
Chain Belt Co., Seattle, Portland, San Francisco
Dodge Manufacturing Co., Mishawaka, Ind., San Francisco, Portland, Seattle
Fafnir Bearing Co., New Britain, Conn.
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles

BELTING AND PACKING
Gates Rubber Co., Denver
Goodyear Tire & Rubber Co., Akron
J. W. Minder Chain & Gear Co., Portland
Raybestos-Manhattan, Inc., Passaic, N.J.; Portland, Seattle
U. S. Rubber Co., Mechanical Goods Div., New York

BLOWPIPE SYSTEMS
American Sheet Metal Works, Portland
Anderson Blowpipe Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland

BLUE PRINTING
Chas. Bruning Co., Inc., Portland

BOILERS AND ACCESSORIES
Gabriel Boiler & Fabrication Co., Portland
Seattle Boiler Works, Seattle

BOILER WATER—Treatment
Coast Neutralizer Corp., Portland, Ore.

BOOMS—Loading
Eugene Truck & Machine Co., Eugene, Ore.
Young Iron Works, Seattle

BOOM BOATS
L. S. Baier & Associates, Portland
Gunderson Bros. Engineering, Portland
Nichols Boat Works Co., Hood River, Ore.

BURNERS—Refuse
Phelps Brothers, Inc., Eugene, Ore.

CARRIAGES—Riderless—Automatic
Corley Mfg. Co., Chattanooga, Portland, Little Rock
Filer & Stowell Co., Milwaukee, Wis.
Forest Products Machy. Corp., Salem, Ore.
I. W. Johnson Engineering Co., Tacoma
Mater Machine Works, Corvallis, Ore.
Monarch Forge & Machine Wks., Portland, Ore.
Peters Co., Portland, Oregon
Sumner Iron Works, Everett, Wash

POWER PLANT EQUIPMENT
Turbines • Boilers • Diesels—Any Size
Write for Prices Giving Your Requirements
CHARLES WEAVER
19701 James Couzens Highway • BR 3-1901 • Detroit 35, Mich.

AUTOMATIC HOOKS
HANDLE LOGS, LUMBER PULPWOOD, TRUCK TRAILERS,
Pipe, concrete hoppers, and steel.
MAR HOOK & EQUIP., INC.
BOX 342, ABERDEEN, WASH. Phone 3995

Archer Blower & Pipe Co.
BLOWER SYSTEMS
REFUSE BURNERS - FANS - REPAIRS
INDUSTRIAL SHEET METAL WORK
Portland 1 CA 7-3642 Seattle 8 MOhawk 1945

FINANCING & LOANS
Trucks, Tractors, Automatic Logging Equipment & Shovels for Individuals & Dealers.
DOUG GEROW FINANCE
920 N.E. 7th Ave., Portland, Ore. • BE 4-7228

COLUMBIA RUBBER MILLS
Molded Rubber Products
Washers • Bushings • Gaskets • Rolls
12022 S.E. Powell Blvd.
Phone PR 4-4824
Portland 66, Ore.

FOR WILLIAMS - WHITE HOT PRESSES
ALLIED NW MACHINE TOOL CORP'N.
1222 S.E. 7th, Portland 7, Ore. Phone BE 4-7513
PERINE MACHINERY & SUPPLY CO.
1921 1st So., Seattle, Wash. MA 2620
Complete Line of Machine Shop Tools — Lathes, drill presses, saws, etc. Write for further information.

USED Circular Saws
Slashers - Trimmer & Head Saws, etc.
PACIFIC SAW & KNIFE CO.
912 S.E. Stark Belmont 4-5463
Portland, Ore.

CARTHAGE MACHINE CO. - CHIPPERS - WOOD ROOM EQUIPT.
HEPPENSTALL CO. - ALLOY CHIPPER & HOG KNIVES
RICE BARTON CORP. - PULP & PAPER MACHINERY
RAY SMYTHE CO.
511 Park Bldg. • 729 S.W. Alder St. • Portland 5, Ore. • Phone: CApitol 3-0502-2238

Reduce your Steam or Air Leakage 100% by using
DAVIES FOUR IN LINE POPPET VALVES
Our 25th Year of Dependable Service
E. C. DAVIES
MANUFACTURER
Box 2335 Phone: BE 6-6473 • PORTLAND 14, OREGON Residence PR 1-0998

Buyers Guide & Classified Section
Advertising Rates

DISPLAY CLASSIFIED BULK SPACE RATES

1 to 44 inches per year	$10.00 per column inch
45 to 89 inches per year	9.00 per column inch
90 to 179 inches per year	8.00 per column inch
180 to 359 inches per year	7.00 per column inch
360 or more inches per year	6.50 per column inch

Classified—(No Display)—Positions and Help Wanted
15c per word. $5.00 minimum. $1.50 additional for box number

No agency discounts on classified or Buyers Guide space.
Copy closing date: 11th of the month preceding publication.
Send instructions to

THE LUMBERMAN
71 COLUMBIA STREET SEATTLE 4, WASHINGTON

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

BOILERS & STEAM GENERATORS

Up to 2000 H.P.—Packaged, Ready for Installation

Representing

CYCLOTHERM *Firetube* | **MURRAY** *Watertube*

NEW OR USED—Oil, gas, wood or coal firing

Factory Agents & Distributors — SALES & SERVICE

ABCO-PACIFIC, Inc.

221 Lloyd Bldg., Seattle, Wash. Phone, MUtual 5434

1200 S. State St., Salt Lake City, Utah Phone, Ingersoll 6-6141 Nite Service, VE-5356

SEATTLE 3628 East Marginal Way MAin 8629

NORTHWEST CHAINS & SPROCKETS INC.

PORTLAND 31 N. W. First Avenue CA 8-3367

JEFFREY MFG. CO. • WHITNEY CHAIN CO.

FABCO FLEXIBLE COUPLINGS • AMERICAN PULLEY CO.

EBERHARDT-DENVER Speed Reducers

LOGGERS HEADQUARTERS FOR

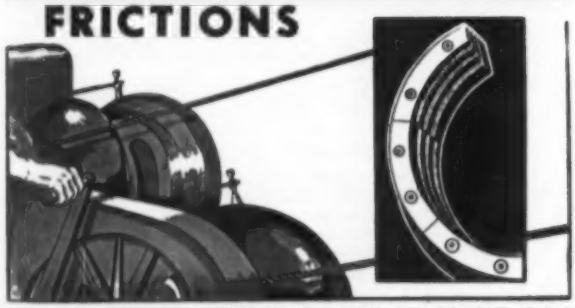
Yellow Strand Wire Rope

Complete Line of Loggers & Contractors Supplies—Ask for pamphlet on Brunner & Lay Pneumatic Tool Accessories—complete stocks carried

EUGENE EQUIPMENT CO.

EUGENE, ORE. • GORDON LAMBERT, Mgr. • PHONE DI-5-8458

CHAMPION FRICTIONS



HELP GOOD MACHINES PRODUCE MORE LOGS

Insure maximum service with minimum maintenance.

FRICTION BLOCKS • BRAKE BLOCKS • BRAKE LININGS

Champion E-Z glide saw guide stock

CHAMPION FRICTION CO.

Phone 4-3353 (Emergency 4-7591) • EUGENE, OREGON

CASTINGS—Iron, Steel and Brass
Electric Steel Foundry, Portland
Link-Belt Co., Seattle, Portland, San Francisco

CHAIN—Steel Roller and Malleable
Chain Belt Company and Baldwin-Duckworth Division, Seattle, Portland, San Francisco
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Los Angeles, Portland
Moline Malleable Iron Co., St. Charles, Ill.; Tacoma, Wash.; Seattle, Portland, Los Angeles
Jeffrey Mfg. Co., Columbus, Ohio
Northwest Chains and Sprockets, Inc., Seattle, Portland
Peoria Malleable Castings Co., Peoria, Ill.; Portland, Ore.
Portland Chain Mfg. Co., Portland

CHAIN SAWS—SEE POWER SAWS

CHIP CAR OSCILLATORS
Western Machinery Corp., Portland, Ore.

CHIP HANDLING
Conveyair Co., No. Vancouver, Canada
Industrial Components, Inc., Portland, Ore.
Rader Pneumatics, Inc., Portland

CHIPPERS
Sumner Iron Works, Seattle
D. J. Murray Co., Wausau, Wisc.
Carthage Co., Carthage, N. Y.
Soderhamn Machine Mfg. Co., Portland, Ore.

CAR CONTROLS—Automatic
Industrial Components, Inc., Beaverton, Ore.

CRANES—Overhead
Ederer Engineering, Seattle
Harnischfeger Corp., Milwaukee, Wisc.
Berger Engineering Corp., Seattle

CRANES AND SHOVELS
Bucyrus-Erie Co., Seattle, Portland, So. Milwaukee
Baldwin-Lima-Hamilton Corp., Lima, Ohio, Seattle, Spokane, Portland, Vancouver, B. C.
Insley Mfg. Co., Indianapolis, Ind.
Link-Belt Speeder Corp., Chicago, Ill., Seattle, Portland, San Francisco
Northwest Engineering Co., Chicago, Seattle, Portland, San Francisco
Marion-Osgood-General, Marion, Ohio, Seattle, Portland, Oakland
Manitowoc Engineering Co., Manitowoc, Wisc.
Thew Shovel Co., Lorain, Ohio
Unit Crane & Shovel Corp., Milwaukee, Wis.
Unit Shovel Co., Milwaukee, Portland, Seattle.

CREOSOTED STAVE FLUMES & CULVERTS
Federal Pipe & Tank Co., Seattle

CUTTERHEADS
Henry Disston & Son, Philadelphia, Pa.
Jones & Orth, Seattle, Wash.

CYLINDERS—AIR & HYDRAULIC
John M. O'Brien Co., Portland, Ore.
Salem Equipment & Supply Co., Salem, Ore.

CYLINDER HEADS, REBUILT
Engineering Development Corp., Seattle
Northwest Motor Welding, Portland, Ore.
Brook Motor Corp., Chicago, Seattle, Portland, Savannah, Memphis, Tampa

EARTH MOVING EQUIPMENT & GRADERS
Huber-Warco Company

ELECTRICAL EQUIPMENT—Motors, Wire, etc.
General Electric Co., Schenectady, N. Y.; Seattle, Portland, San Francisco, Los Angeles
Kirk Hillman Co., Seattle, Wash.

ELECTRIC FEEDWORKS
Charles Weaver Co., Detroit, Mich.
Zidell Machinery & Supply Co., Portland, Ore.

ENGINES—DIESEL
Allis-Chalmers (Buda), Portland, Seattle
Caterpillar Tractor Co., Peoria, Seattle, Portland, San Francisco
Cummins Engine Co., Columbus, Ind.; Portland, Seattle

General Motors, Detroit, Seattle, Portland, Stockton, San Francisco, Los Angeles
Gunderson Bros. Engineering, Portland, Ore.
International Harvester Co., Chicago, Portland, Seattle, San Francisco
Precision Engineering Co. of Sacramento, Calif.
Waukesha Motor Co., Waukesha, Wisc., Seattle, Portland, Ore., San Francisco, Los Angeles

ENGINES—GAS

Ford Motor Company, Industrial Engine Division, Dearborn, Mich.
Chrysler Industrial

ENGINEERS—FORESTRY & MILL

Columbia Pacific Corp., Portland, Ore.
D. E. Collinson, Milwaukie, Ore.
Industrial Development Co., Tacoma
Production Management Engineering Association, Portland, Los Angeles, San Francisco
W. H. Rambo, Portland
K. B. Wood & Assoc., Portland

ENGINEERS—INDUSTRIAL

Production Management Engineering Association, Portland, Los Angeles, San Francisco

ENGINEERS' SUPPLIES

Chas. Bruning Co., Inc., Portland

FANS AND BLOWERS

American Sheet Metal Works, Portland
Anderson Blowpipe & Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland, Seattle

FILES

Atkins Saw Div., Seattle, Portland, San Francisco
Nicholson File Co., Providence, R. I.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland, Seattle, San Francisco

FINANCING EQUIPMENT

Doug Gerow Finance Co., Portland, Ore.
Ray Parker Machy. Sales Co., Portland, Ore.

FIRE PROTECTION EQUIPMENT

D. B. Smith & Co., Utica, N. Y.

FLEXIBLE COUPLINGS

Northwest Chains & Sprockets, Inc., Seattle, Portland

FRICTION BLOCKS

Champion Fricton Co., Eugene, Ore.

GANG SAW GUIDES

Champion Fricton Co., Eugene, Ore.

GANG SAWMILLS

Albany Machine & Supply Co., Albany, Ore.
Corley Mfg. Co., Portland, Ore., Chattanooga, Tenn., Little Rock, Ark.
Gunderson Bros. Corp., Portland, Ore.
Keystone Machine Works, Roseburg, Ore.
"Sunbo" Mill Engineering & Supply, Seattle
National Machinery Sales, Gold Hill, Ore.
Portland Machinery Co., Portland
Schnitzer & Wolf Machinery Co., Portland, Ore.
Soderhamn Machine Mfg. Co., Portland, Ore.
Star Machinery Co., Portland, Seattle
Western Steel & Supply Co., Dallas, Ore.

GEARS AND GEAR MOTORS

Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles
Pacific Gear Works, Los Angeles, San Francisco
Western Gear Works, Seattle

GLUES

Reichhold Chemicals, New York City

GRINDING WHEELS

Borg Warner Corp., Atkins Saw Div., Indianapolis
Norton Co., Worcester, Mass.; Seattle, Portland, San Francisco
Simonds Abrasive Co., Philadelphia, Pa.
Simonds Saw & Steel Co., Fitchburg Mass.; Seattle, Portland, San Francisco

HOGS

Portland Machinery Co., Portland
Sumner Iron Works, Everett, Wash.

HOSE

Aero-Coupling Corp., Burbank, Calif., Portland, Ore.
B. F. Goodrich Co., Akron
Firestone Tire & Rubber, Akron

BUYERS GUIDE and CLASSIFIED SECTION

MILWAUKEE MACHINERY CO.

4000 S. W. Macadam — Portland 1, Ore.
Phone CA 8-7228

WE BUILD, REMODEL, & SUPPLY COMPONENTS FOR OVERHEAD ELECTRIC CRANES.

WE HAVE SHOP FACILITIES FOR REPAIRING ELECTRICAL & MECHANICAL EQUIPMENT.

SERVICE EXCELLENT

Truck & Industrial Instruments

ALL TYPES—IMMEDIATE SERVICE

Ask about our warning recording pyrometer.

Over 30 years experience • Customer parking

INSTRUMENT SALES AND SERVICE

315 S.E. 7th Ave. at Pine — Portland 14, Oregon
Jesse M. Roseberry, Manager — BE 4-7327

"Jet Dozer"

NICHOLS

Steel Boom Pond Boats

Nichols steel boom boats and tug boats, are used wherever logs are sorted, handled or towed. 16'-20'-24' boom boats. Ask about our Jet Dozer Boats.

Write for pamphlet with names of users and other descriptive matter.

NICHOLS BOAT WORKS CO.

HOOD RIVER, OREGON

Phones: Shop: 6112 — Office: 4284

"One GOOD air photo is worth 10,000 words"

WESTERN WAYS, Inc.

AERIAL INDUSTRIAL PHOTOGRAPHERS

275 Vera Drive — Corvallis, Oregon

(Formerly known as Valley Flying Service, Inc.)

Continually serving the industries of the West with air photos of highest quality

Oblique—Vertical—and our popular enlargements hand colored in natural oil

NO DEPOSITS . . . NO CONTRACTS . . . Just advise us of your exact plant location . . . then see and select your photos. Numerous flights to all areas.

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

Save on Your INDUSTRIAL TRACK

FOSTER QUALITY — FULLY GUARANTEED

RELAYING RAILS

Handle more cars better—cost less to install and maintain. Foster stocks all Rail Sections 12# thru 175#, Switch Material and Track Accessories.

SEND FOR CATALOGS

RAILS - TRACK EQUIPMENT - PIPE - PILING

L B FOSTER co.

PITTSBURGH 30 • NEW YORK 7 • CHICAGO 4
ATLANTA 8 • HOUSTON 2 • LOS ANGELES 5

SEATTLE REFUSE BURNERS

Prefabricated For Easy Erection

Send for Catalog No. 11

- BOILERS—NEW & USED
- TANKS, STACKS, CONVEYORS
- CUSTOM FABRICATION WORK

SEATTLE BOILER WORKS, INC.
Since 1889

5237 East Marginal Way • Seattle, Wash.
Phone: Day - RAinier 0737 • Night - Gibson 7028

PIONEER NW SPRING MANUFACTURER

Springs for Tractors Trucks Trailers

Portland, Ore. CA 7-3687

Truck Drive Shaft Repairing—Lengthening—Shortening—Balancing

BENZ SPRING COMPANY

Spring Repairing & Resetting

Seattle, Wash. FR 2828

THESE SHREWD OPERATORS HAVE PLAYED THEIR CARDS
RIGHT AND HAVE WON WITH ABANY BAND MILLS
ABANY
SAWMILL EQUIPMENT
ALBANY MACHINE & SUPPLY CO.

Re'ne Fritz, Mgr. • Phone Wab. 8-9441

Goodyear Tire & Rubber Co., Akron. Seattle, Portland
U. S. Rubber Co., New York City

HOT PLATE PRESSES
Allied Northwest Machine Tool Corp., Portland
Columbia Div. of The Lodge & Shipley Co., Hamilton, Ohio
Washington Iron Works, Seattle
Williams-White & Co., Moline, Ill.
R. D. Wood Co., Philadelphia

HYDRAULIC CONTROL VALVES
Vickers, Inc., Detroit, El Segundo, Calif., Seattle
The Oilgear Co., Milwaukee, Wis., Los Angeles, Seattle

INSTRUMENTS AND REPAIRS
Instruments Sales & Service, Portland
Moore Dry Kiln Co., No. Portland

KILNS AND DRIERS
Gram Development Co., Portland, Ore.
C. M. Lovsted Co., Seattle, Portland, San Francisco
Moore Dry Kiln Co., Jacksonville, Fla.; North Portland, Brampton, Ont.; Vancouver, B. C.

KNIVES
Henry Disston & Sons, Philadelphia
Ohio Knife Co., Cincinnati, Portland, Seattle, Los Angeles, Oakland, Vancouver, B. C.
Simonds Saw & Steel Co., Fitchburg, Mass., Seattle, Portland, San Francisco
Ray Smythe, Portland

KNIFE GRINDING MACHINERY
Hanchett Manufacturing Co., Big Rapids, Mich., Portland

KNOT SEALERS
Western Machinery Corp., Portland, Ore.

LEASING MACHINERY
Ray Parker Machinery Sales Co., Portland, Ore.

LOADBINDERS
American Logging Tool Corp., Seattle, Portland, San Francisco, Los Angeles
Atkins Saw Div.—Borg - Warner Corp., Indianapolis
Thomas Laughlin Div., Portland, Maine
Lebus Rotary Tool Works, Longview, Texas

LOANS
Doug Gerow Finance Co., Portland, Ore.

LOGGING BLOCKS, SUPPLIES AND TOOLS
Berger Engineering Co., Inc., Seattle
Electric Steel Foundry Co., Portland, Seattle
Eugene Equipment Co., Eugene, Ore.
Howard-Cooper Corp., Portland, Seattle
Thomas Laughlin Div., Portland, Maine
Skookum Co., Inc., Portland
Washington Iron Works, Seattle
Young Iron Works, Seattle

LOG LOADERS (Also See CRANES)
Berger Engineering Co., Inc., Seattle
R. G. LeTourneau, Inc., Longview, Texas
Washington Iron Works, Seattle
Skagit Steel & Iron Works, Sedro-Woolley, Wash.

LOG STACKERS
R. G. LeTourneau, Inc., Longview, Texas

LOGGING TRAILERS
Freuhauf Trailer Co., Detroit
Trailmobile Co., Cincinnati
Reliance Truck & Trailor Co., San Francisco

LUMBER CARRIERS AND LIFT TRUCKS
Gerlinger Carrier Co., Dallas, Ore.
Hyster Co., Portland, Seattle
Clark Equipment Co., Ross Carrier Line, Portland, Seattle, San Francisco

LUMBER FINANCING
Douglas, Guardian Warehouse, Corp., New Orleans, Portland, Los Angeles, San Francisco

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS
C. M. Lovsted & Co., Inc., Seattle
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont., Jacksonville, Fla., North Portland
Stetson-Ross Machine Co., Seattle

OILS AND GREASES
General Petroleum Corp., Los Angeles, San Francisco, Portland, Seattle
Lubriplate Div., Fiske Bros. Refining Co., Newark, N. J.; Seattle, Portland
Richfield Oil Corp., Los Angeles
Shell Oil Co., San Francisco
Standard Oil Co., San Francisco, Seattle, Portland, Spokane, Tacoma, Medford
Texas Company, The, Seattle, Portland, San Francisco
Tide Water Associated Oil Co., San Francisco, Los Angeles, Portland, Seattle
Union Oil Co., Los Angeles, San Francisco, Portland, Seattle

OIL FILTERS
Luber-Finer, Inc., Los Angeles

OUTBOARD MOTORS
Evinrude Motors, Wilwaukee, Wisconsin
Johnson Motors, Waukegan, Ill.

PIKE POLES—ALUMINUM
Alloy Welding & Fabricating Co., Portland

PIPE (Drainage)
Armco Drainage & Metal Products, Inc., Berkeley, Los Angeles, Portland, Seattle

PIPE, TANKS, STACKS
Federal Pipe & Tank Co., Seattle
Seattle Boiler Works, Seattle, Wash.

PLANING MILL AND WOODWORKING MACHINERY
General Machinery Co., Portland
Greenlee Tool Co., Rockford, Ill.
Irvington Machine Works, Portland, Ore.
Mereen - Johnson Machine Co., Minneapolis, Minn.
Newman Machine Co., Greensboro, N. C.
Stetson-Ross Mach. Works, Seattle
S. A. Woods Machine Co., Portland, Ore.
Mattison Machine Works, Rockford, Ill.

PLANT DESIGN AND CONSTRUCTION
W. H. Rambo, Portland, Ore.

PLYWOOD AND VENEER MACHINERY AND SUPPLIES
Allied Northwest Machine Tool Corp., Portland, Ore.
Coe Mfg. Co., Painesville, Ohio; Portland
Columbia Div. of The Lodge & Shipley Co., Hamilton, Ohio
Columbia Rubber Mills, Portland, Ore.
Ederer Engineering Co., Seattle
Greenlee Bros. Co., Rockford, Illinois
Mereen - Johnson Machine Co., Minneapolis
Reichhold Chemicals, Inc., New York City
Williams, White & Co., Moline and Chicago, Seattle

POWER BRAKES
Roberts Motor Co., Portland, Ore.
Westinghouse Automatic Pacific Coast Brake Co., San Francisco, Los Angeles, Portland, Seattle

POWER PLANT BRICK WORK
F. E. Balden & Co., Portland

POWER SAWS
Homelite Corp., Port Chester, N. Y., Seattle, Wash.
McCulloch Motors Co., Los Angeles, Calif.
Titan Saws, Inc., Seattle
Zidell Machinery & Supply Co., Portland, Ore.

PUMPS, AIR, HYDRAULIC
Ledeen Mfg Co., Los Angeles, Calif.

BUYERS GUIDE and CLASSIFIED SECTION

ANDERSON HI-EFFICIENCY CYCLONIC INCINERATORS

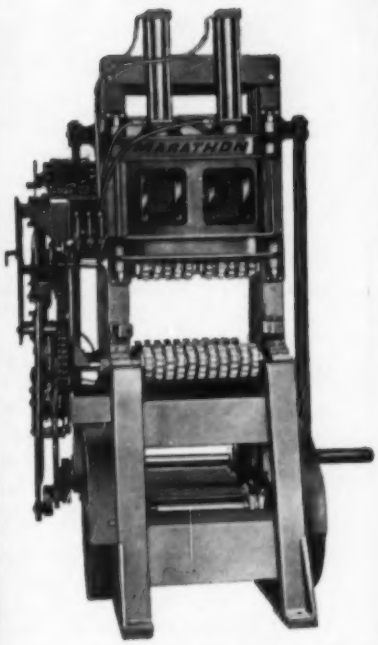
Cleaner and Faster burning
Easily installed
Structural members air cooled
Cyclonic burning action

• Blower Systems • Dust Control
• Fans • Specialty Items

ANDERSON BLOWPIPE & MANUFACTURING CO., INC.
5960 4th Ave., S. • Seattle 8, Wash.

YOU ASKED FOR IT!!

AND HERE IS THE 28" MARATHON GANG



Above photo shows 28" Marathon Gang saw with divided rolls for high production on small cants.

PROVEN
- By months of actual sawmill operation.
- Through field tests on the new 28" series Marathon.
- Plus the accumulated experience in manufacturing the highly successful and proven 20" series Marathons.

DEPENDABLE
- Rugged simplicity built into Marathon gangs result in minimum down time and extremely low maintenance costs.
- You can depend on Marathon.

LOW COST
- As always the "by word" for Marathon.
- High quality assembly line production makes Marathon the largest manufacturer of gang saws in North America—with resulting lowest costs.

28 Special Features Include

- Divided rolls for small cants
- No parts problems
- SKF roller bearing main shaft
- Sturdy rugged construction
- Made in the Northwest
- Feed speeds to 32' FPM
- 28 x 28 opening or
- 15 x 28 opening
- Assembled ready to run
- Prompt delivery

28" Series Marathon Gang saw—Cant gang $12,500.00—
Log gang $13,500.00 FOB Portland, Ore.
WRITE FOR COMPLETE DETAILS TODAY!

The Portland Machinery Co.

"When You Think of Machinery Think of Portland Machinery"

208 S.W. First Ave. • Portland, Oregon • Phone CA 8-9633

BUYERS GUIDE and CLASSIFIED SECTION

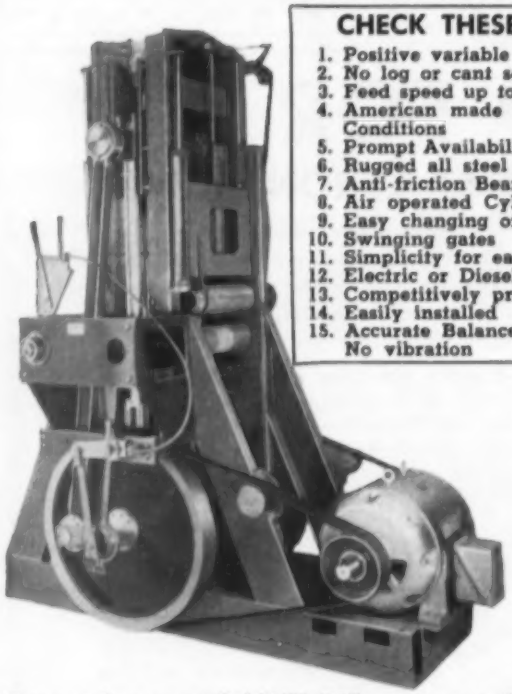
Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

Sweed

THE MOST MODERN GANG SAW

Highest Overrun and Accuracy in Cutting combined with high production

SEE and COMPARE Before You Buy



CHECK THESE FEATURES

1. Positive variable feed
2. No log or cant sorting
3. Feed speed up to 35 ft. per minute
4. American made for American Conditions
5. Prompt Availability of Repair Parts
6. Rugged all steel construction
7. Anti-friction Bearings throughout
8. Air operated Cylinders
9. Easy changing of Saws
10. Swinging gates
11. Simplicity for ease of maintenance
12. Electric or Diesel Power
13. Competitively priced
14. Easily installed
15. Accurate Balance: No vibration

Use our experience to help you plan a modern layout to get maximum recovery.

Come and see us at Gold Hill. Will meet you at the Medford Airport.
(United Airlines, West Coast Airlines, Southwest Airlines)

Phone, Wire or Write for details or literature

NATIONAL MACHINERY SALES National Distributors

P. O. Box 518, Gold Hill, Oregon, Phone Gold Hill 5-9145

Portland 22, Oregon, 5924 S. E. McNary Rd. Phone OLive 4-1906

PLEASE SEND DESCRIPTIVE PAMPHLET . . .

Name .....

Street, P. O. .....

City and State .....

Company Name .....

RADIO EQUIPMENT MANUFACTURERS
General Electric Company, Electronics Dept., Syracuse, N. Y.; San Francisco, Portland, Seattle

RAILWAY EQUIPMENT
C. M. Lovsted & Co., Inc., Seattle

REFUSE BURNERS
Archer Blower & Pipe Co., Portland, Ore.
C & D Welding Co., Redding, Calif.
Rees Blowpipe Mfg. Co., San Francisco, Los Angeles
Seattle Boiler Works, Seattle

REPAIRING—SPRINGS
Benz Spring Co., Portland, Ore.

RUBBER SPECIALTIES
Columbia Rubber Mills, Portland
Gates Rubber Co., Denver, Colo.
Raybestos - Manhattan, Inc., Manhattan Rubber Div., Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle

SAP STAIN PREVENTIVES
Chapman Chemical Co., Memphis, Tenn.; Portland, Ore.
E. I. DuPont de Nemours & Co., Inc. (Grasselli Chemical Dept.) Seattle, Portland,

SAP STAIN SPRAYING MACHINES
Keystone Machine Works, Roseburg, Ore.

SAW FRICTION GUIDES
Champion Friction Co., Eugene, Ore.

SAWMILL ERECTION
Ward, M. A. Construction Co., Eugene, Ore.
Thompson & Holmberg, Inc., Portland, Ore.

SAWMILL MACHINERY
Albany Machine & Supply Co., Albany, Ore.
Armstrong Manufacturing Co., Portland
Bader & Carroll, Portland
Caldwell Machinery Co., Portland
Corley Mfg. Co., Portland, Chattanooga, Little Rock
Crown Machinery & Supply Co., Portland
Forest Products Machinery Co., Salem, Ore.
Frick Co., Waynesboro, Pa.
General Machinery Co., Portland
Goldstein & Bloch, Aberdeen, Wash.
Great Western Mfg. Co., Portland, Ore.
Irvington Machine Works, Portland
Johnson Engineering Works, I. W., Tacoma
Keystone Machine Works, Roseburg, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls
L-M Equipment Co., Portland
Mater Machine Works, Corvallis
McDonough Mfg. Co., Eau Claire, Wis.
Medford Machinery Co., Medford, Ore.
Mereen - Johnson Machine Co., Minneapolis
Mill Engineering and Supply Co., Seattle
Monarch Forge & Machine Wks., Portland
National Machinery Sales, Gold Hill, Ore.
Newman Machine Co., Greensboro, N. C.
Northwest Marine Iron Works, Portland
Peters Co., The, Portland
Portland Machinery Co., Portland
The Prescott Co., Menominee, Mich.
Prescott Iron Works, Inc., Portland
Prineville Machine & Supply Co., Prineville, Oregon
Salem Equipment & Supply Co., Salem, Ore.
Schurman Machine Wks., Woodland, Wash.
Soderhamn Machine Mfg. Co., Portland, Ore.
Soule Steam Feed Works, Meridian, Miss.
Star Machinery Co., Seattle, Spokane, Portland
Sumner Iron Works, Everett
Ward Construction Co., M. A., Eugene, Ore.
Western Steel & Supply Co., Dallas, Ore.
Wheland Co., The, Chattanooga, Tenn.; Portland
Zidell Machine & Supply Co., Portland

SAWS, KNIVES AND CUTTERHEADS
Atkins Saw Div., Seattle, Portland, San Francisco
Caldwell Machinery Co., Portland, Ore.
Henry Disston & Sons, Philadelphia, Pa.
R. Hoe & Co., Inc., New York, N. Y., Portland, Seattle, San Francisco
Jones & Orth Cutterhead Co., Seattle, San Francisco

Ohio Knife Company, Seattle, Portland, Oakland, Cincinnati
Pacific Saw & Knife Co., Portland
Simons Saw & Steel Co., Fitchburg, Mass.; Seattle, Portland, San Francisco
Spear & Jackson, Ltd., Vancouver, B. C.

SAWS, POND AND DECK

Kliever Machine Shop, Medford, Ore.
L-M Equipment Co., Portland, Ore.
Northwest Marine Iron Wks., Portland, Ore.

SAW SHARPENING MACHINERY

Armstrong Manufacturing Co., Portland
Corley Mfg. Co., Portland, Ore., Chattanooga, Tenn., Little Rock, Ark.
Hanchett Mfg. Co., Big Rapids, Mich., Portland

SHOVELS (See CRANES, also LOG LOADERS) SIDE HEAD GRINDERS

Armstrong Mfg. Co., Portland

SPARK ARRESTERS AND ARRESTER CLOTH

American Sheet Metal Works, Portland
Roebling's, John A. Sons Co., Trenton, N. J.; San Francisco, Portland, Seattle

SPRINGS—LEAF & COIL

Benz Spring Co., Portland, Ore.

SPROCKETS

Chain Belt Co., Seattle, Portland, San Francisco
Link-Belt Co., Seattle, Portland, San Francisco

STEEL STRAPPING

Acme Steel Co., Chicago, Ill.; Los Angeles, San Francisco, Seattle, Portland, Vancouver, B. C.
Signode Steel Strapping Co., Spokane, Seattle, Portland, San Francisco and Los Angeles
United States Steel Co., Gerrard Steel Strapping Div., Chicago

TIRES AND RECAP

Firestone Tire & Rubber Co., Akron, Ohio
Goodrich Co., B. F. Akron
Goodyear Tire & Rubber Co., Akron

TORQUE CONVERTERS

Clark Equipment Co., Torcon Div., Battle Creek, Mich.
Gunderson Bros. Engineering, Portland, Oregon
Twin Disc Clutch Co., Seattle, Portland, Racine, Wis.

TRACTORS, EQUIPMENT AND ACCESSORIES

Allis-Chalmers Co., Milwaukee, Spokane, Portland, Seattle
Caterpillar Tractor Co., Peoria, Ill.; Seattle, San Leandro, San Francisco, Portland, Spokane
Euclid Tractor, Cleveland, Ohio
Howard-Cooper Corp., Portland, Seattle
Hyster Co., Portland
International Harvester Co., Chicago
Wood Tractor Co., Portland

TRUCKS, TRAILERS, ACCESSORIES

Autocar Trucks, Exton, Pa.
Ford Motor Co., Dearborn, Mich.
International Harvester Co., Chicago
Kenworth Motor Truck Corp., Seattle, Portland
Mack Manufacturing Co., Long Island City, N. Y., Seattle, Wash.
Dodge Truck Division, Detroit
Euclid Truck, Cleveland
Parkersburg Rig & Reel Co., Los Angeles
Peterbilt Motors Co., Oakland
Reliance Trailer & Truck Co., San Francisco
Roberts Motor Co., Portland
Truck & Industrial Equipment Co., Portland
Warn Mfg. Co., Seattle
White Motor Co., Seattle, Portland, San Francisco
Willys Motor, Toledo, Ohio

TRUCK TRANSMISSIONS AND CONVERSIONS

Eaton Manufacturing Co., Cleveland, Ohio
Fuller Mfg. Co., Kalamazoo, Mich.
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

TURBINES—Electric

Charles Weaver, Detroit, Mich.

VALVES—AIR & HYDRAULIC

Caldwell Machinery Co., Portland, Ore.
Davies, E. C., Portland
Ledeen Mfg. Co., Los Angeles, Calif.
John M. O'Brien Co., Portland, Ore.

VENEER TRAY EQUIPMENT

Western Machinery Corp., Portland, Ore.

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

WEED AND GRASS CONTROL

E. I. DuPont de Nemours & Co., Inc., CMU Division, Wilmington, Del.

WELDING SUPPLIES

Industrial Air Products Co., Portland

WIRE ROPE

American Chain & Cable Co., Bridgeport, Conn.
Bethlehem Steel Co., San Francisco, Portland, Seattle
Brodecrik & Bascom Rope Co., Seattle, Portland, San Francisco, Los Angeles, Calif.
Edwards Company, E. H., San Francisco, Los Angeles, Portland, Seattle
Leschen Wire Rope Div., H. K. Porter Co., Inc., Seattle, Portland, San Francisco
Macwhyte Co., Kenosha, Wis.; Seattle, Portland, San Francisco, Los Angeles
Roebling's Sons Co., John A., Seattle, Portland
U. S. Steel Corp., Seattle, Fordham, San Francisco
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Division . . . Denver, Seattle, Portland, San Francisco, New Orleans, Spokane

WORK and TUG BOATS

L. S. Baier and Associates, Portland, Ore.

WOOD PRESERVATIVES

Chapman Chemical Co., Memphis, Tenn.; Portland, Ore.
Du Pont, E. I. de Nemours & Co., Seattle, Portland, San Francisco

YARDER & SKIDDERS

Berger Engineering Co., Seattle
Skagit Steel & Iron Works, Sedro-Woolley, Wash.
Washington Iron Works, Seattle

BUYERS GUIDE and CLASSIFIED SECTION

BOHEMIA-TYPE, Patented
HEELING BOOM

Increases the lifting capacity of any log loader. The field-proven design of the BOHEMIA-TYPE loader puts the heeling point as close to the center pin as possible—which means more lifting capacity for any Crawler or Rubber-tired Mounted Log Loader.

Wire for Details & Complete List of MANY SUCCESSFUL USERS

EUGENE TRUCK & MACHINE COMPANY
375 E. 5th St. • Eugene, Oregon
Phone DI-5-3375

Electrolytic Coast Neutralizer

See corrosion story in Power's Dec. issue, or write us for a copy.

Eliminates Rust, Scale and Corrosion Without the Use of Chemicals.
For Use in Boilers—Condensers—Evaporators—Hot Water Systems • Modern Water Treatment—Automatic—Logical—Economical—Fully Guaranteed • You can cut operating costs with this product

COAST NEUTRALIZER CORPORATION
61 S. W. 2nd AVE. • PORTLAND 4, ORE. • PHONE CA 3-6235

WHAT DO YOU WANT A POND BOAT TO DO????

THIS—

Fast maneuverability is not enough—if you can't tow a decent load. Nor is a pair of logs equipped with an under-powered motor of much use—it is like using an egg beater to propel the QUEEN MARY. Slithering water bags built of sheet metal put on quite a performance—spinning and jigging about—until the going gets heavy—Well, they just stay water bags.

OR THIS

Now if you really want a rugged dozer boat that CAN maneuver, get a Baier Pond Boat. It will get right down and tow three or four sinkers, push hobbers right up onto the log chain and break ice when the occasion arises.

Also Baier boats have been used to knock down cold decks in winter storage ponds and are fast enough to run errands with dog chains and gear.

A Baier steel boat is built to give you all these things and tough enough to keep doing the rough jobs year after year.

Ask the mills who own one. We will be happy to give you their names.

Pioneer Steel Pond Boat Builders

L. S. BAIER & ASSOCIATES
4538 SW. Macadam Ave.
Portland 1, Ore. CA 8-2445

16' Pond Boat

PROFESSIONAL SERVICES

DEL COLLINSON
Registered Engineer
DESIGNS • ESTIMATES • REPORTS
Sawmills Planing Mills
Plywood Plants
11741 S. W. Boones Ferry Rd.
Phone: CHarry 6-2240 Oswego, Oregon

WILLIAM S. KELTON CO.
Established 1913
General Appraisers
Industrial • Commercial
Residential Properties
(Including Equipment)
for
INSURANCE • TAXES
INHERITANCES • MERGERS
317 Queen Anne Avenue Seattle 9, Wash.
MAin 4366

HERBERT HESSLER
Forest Industries Consultant
SAWMILLS — PLYWOOD
WOODWORKING
Plant Modernization and Construction
Lumber Handling and Sorting Automation
Research and Process Development for
Maximum Utilization
Route 2, Box 51 Newberg, Oregon
Telephone 3034

Medford Machinery Company
Engineers & Contractors
Specializing in the design and construction of sawmills, plywood and veneer plants, power plants, barking, chipping and hardboard plants.
Specialists in Complete Utilization
Manufacturers of
FRYER DRYKILNS
1015 N. CENTRAL AVE. P.O. Box 266
MEDFORD, OREGON Phone 3-5262

K. B. Wood & Associates, Inc.
Forest Management
Timber and Development Appraisals
Logging Engineering and Surveying
Aerial Mapping
2623 N.W. Industrial St. Portland, Oregon
CApitol 6-2485-86

F. E. BALDEN COMPANY
Mechanical Contractors
122 S. W. First Ave.
Portland 4, Ore.
Phone: CApitol 8-5652

DESIGN ESTIMATES SUPERVISION CONSTRUCTION
THOMPSON & HOLMBERG INC.
Specializing in Wood Working Plants Sawmills, Veneer, Planing Mill, Wood Rooms, Barking and Chipping Installations
GUNNAR J. HOLMBERG Terminal Sales Bldg.
Phone CApitol 8-1965 Portland 5, Oregon

COLUMBIA PACIFIC CORPORATION
Consulting Engineers
SPECIALISTS IN: Machinery design, Sawmills, Barking & Chipping, Hardboard & Particle Board Plants.
2130 NW York
CA 3-8639 Portland 10, Oregon

W. H. RAMBO
Industrial Plant Engineer
Layout, Estimates, Design, Reports,
Construction Supervision
SPECIALIZING IN: Sawmills, Barking and Chipping Installations, Plywood Plants, Hardboard Plants, Woodworking Plants, Planing Mills, Power Plants and Dry Kiln Installations.
Loyalty Bldg. Portland 4, Oregon
CApitol 3-5101

Our Facilities . . . Experience, and Services
ARE AVAILABLE TO YOU
KLAMATH IRON WORKS
P. O. Box 129 Klamath Falls, Ore.
Phone TU 4-7721

Blueprinting-Photocopies
Engineering-Drafting Supplies
Copyflex and Verifax Copying Machines
BRUNING
317 S. W. Third Ave. Portland 4, Ore.
CA 8-2344

INDUSTRIAL DEVELOPMENT CO.
3011 Chandler St. Tacoma 2, Wash.
DESIGNERS & CONSULTANTS FOR HARDBOARD, CHIP & FLAKE BOARD & OTHER WOOD UTILIZATION PLANTS
Development and "Mock-Up" Facilities
PHONE HAwthorne 4413 Dale L. Schubert Engineering

FOR SAWMILLS SEE
M. A. WARD
CONSTRUCTION CO., INC.
391 E. Third Avenue. • Eugene, Oregon
Phone: 4-5531

POSITION WANTED

Experienced Box factory manager available, also some experience in Saleswork Excellent references. Write TL Box 135, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

WANTED

First assistant to Chief Engineer in power plant. Will pay good salary, chance for advancement. Must be capable of synchronizing turbines on line and of operating general boiler room for large lumber company in central Washington. Submit qualifications to TL Box 136, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

AVAILABLE

Mill Foreman. Good production man. Prefer West Coast or Alaska. Write TL Box 138, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

OFFICE MANAGER

Thoroughly familiar with all phases of accounting for Lumber and Logging. Twelve years experience as Office Manager. Presently employed. Prefer work with Lumber or Wood Products Company in Pacific Northwest. Write TL Box 140, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

C. Kirk Hillman Company
Designers & Manufacturers of Special Electrical Equipment
VARIABLE SPEED DRIVES
For All Veneer, Plywood and Sawmill requirements
3201 First Ave., South • ELiot 6561 • Seattle 4, Washington

MECHANICAL LOG BARKERS
Nicholson Manufacturing Company
Designers—Builders of Special Machinery and Plants
35125 "A" Street S. E. • TEmple 3-4800 • Auburn, Washington

BAND SAW FILER

Wants steady position. Has 21 years experience both mills and saw repair shops. Available at once. A-1 references. Write TL Box 141, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

AVAILABLE

Experienced lumberman with wide acquaintance in industry seeks sales representation in Chicago area, for West Coast and Western pine mill. Write TL Box 143, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

SUP'T. AVAILABLE

Exp. both Dry & Green Mills, Pond thru Sales—High Prod. Max. efficiency. Best references. Fir & Hem. exp. Write TL Box 144, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

WOODWORKING - MOULDING PLANT

Ideal location near Medford, Oregon. Out-of-state owner will sell to qualified party for $5,000 down with liberal terms on balance. Excellent opportunity for experienced man with limited capital to get into a profitable business of his own. Write TL Box 145, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

AVAILABLE

First Class Head Saw Filer. Experienced Sawmill, Remanufacturing Plant. Prefer Sawmill, will consider good Remanufacturing Plant offer. Softwood, Hardwood, Frozen Timber no problem. Presently self-employed own Armstrong equipped Saw Shop. Able to leave anytime. Write TL Box 146, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

PLYWOOD SUPERINTENDENT

Thoroughly familiar with all phases of production. Ten years experience. Capable of handling supervision of entire plant. Excellent references. Immediately available. Will consider foreign employment. Write TL Box 147, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

WANTED

EXPERIENCED BAND MILL SAWYER to operate 7' Band Mill, Riderless Carriage with Sel-set, cutting 50/55 M 8-hour shift, mostly Pine, some Douglas & White Fir. Mill located Northern New Mexico. Write DUKE CITY LUMBER COMPANY, P. O. BOX 1364, Albuquerque, New Mexico.

FOR SALE

SAW MILL, electric and air, automatic carriage, 4 men on mill floor. Capacity 65,000 per shift. Complete with planer. New Yard equipment. Centrally located northern California. Adequate timber supplies. For full details write TL Box 134, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

FOR SALE or LEASE

Small Eugene, Oregon Plywood Specialty mill, with sander, for sale or lease. Write TL Box 139, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

FOR SALE

Chain setup for transferring 4' PULPWOOD, complete with drums, drives, and sprockets, for SALE. Please write to TL Box 142, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

FOR SALE

200 H. P. Electric carriage drive, including cable, sheaves controls, etc. Good operating condition. Will consider terms or trade. Bate Lumber Co., Merlin, Josephine Co., Oregon. Phone Greenwood 6-7711.

JONNUM "SENSATION" WOOD SPLITTER

Wood splitter "SENSATION", outsplit ten men. Woodsmen, dealers, agents, Write: Jonnum Mfg. Co., Pittsburgh, Kansas.

Machinery Bargains

3 Phase Ball Bearing Electric Motors, practically new shape.

1—½ H.P. Master Gearhead Motor, 9 R.P.M.
1—1 H.P. U.S. Gearhead Motor, 45 R.P.M.
1—1½ H.P. U.S. Gearhead Motor, 68 R.P.M.
1—2 H.P. U.S. Gearhead Motor, 125 R.P.M.
1—2 H.P. U.S. Gearhead Motor, 84 R.P.M.
1—2 H.P. U.S. Gearhead Motor, 45 R.P.M.
1—3 H.P. U.S. Gearhead Motor, 230 R.P.M.
2—5 H.P. U.S. Gearhead Motors, 84 R.P.M.
1—3 H.P. Master Gearhead Motor, 34 R.P.M.
1—5 H.P. Link Belt Gearhead Motor, 45 R.P.M.
1—7½ H.P. G.E. Pacific Gearhead Motor, 68 R.P.M.
1—50 H.P. 1750 R.P.M. G.E. Ball Bearing Motor
1—G.E. 3 Phase 440 Volt Compensator
1—30 H.P. 900 R.P.M. F.M. I.Z.K. Ball Bearing Motor
1—25 H.P. 3600 R.P.M. G.E. Ball Bearing Motor
1—25 H.P. 1750 R.P.M. G.E. Ball Bearing Motor
1—5 H.P. 1200 R.P.M. G.E. Ball Bearing Motor
1—Falk Speed Reducer 5 H.P. 30 R.P.M.
1—12½ K.V.A. Generator 1 Phase 110-220 V.
1—7½ K.V.A. Lighting Plant 1 Ph. 110-220 V.
1—15 H.P. 3 Ph. 440 V. Worthington Air Compressor 80 C.F.M. A.S.M.E. Tank Mounted, Ball Bearing, Air Cooled, late style unit.

We have on hand a wealth of BARGAINS in Pumps, Motors and Machinery, too numerous for listing. Simply ring our phone, Aberdeen 397. Call for "Pump Man".

GRAYS HARBOR EQUIPMENT CO.

BOB ISAACSON—"The Pump Man"

Ph. AB. 397 Aberdeen, Wash.

NEW In Stock...

36" Mill Enginr'g Cant gang saw, with automatic Overhang.
No. 22 Armstrong Elect. gang saw grinder.
No. 4 Armstrong electric driven stretcher . . . roll.
FULLER ROTARY 225 CFM compressor.
FULLER ROTARY 375 CFM compressor.
FULLER ROTARY 475 CFM compressor.

USED Bargains...

26" SUNBO log gang saw.
36" SUNBO cant gang saw. (divided rolls)
12" x 60" Sumner late type edger, with power shifters.
8" x 48" Hesse Ersted Ball br'g edger.
IRVINGTON 48" cut-off saw, 5 HP motor.
DIAMOND No. 45 Roller Br'g hog.
ELECTRIC MOTORS—
SPEED REDUCERS.

WE ARE NEVER UNDERSOLD

We are distributors for Mill Engineering & Supply Co. log gangs and cant gangs Fuller rotary air compressors.

Crown Machinery & Supply Co.

FRED G. SWENSSON THOS. I. HALEY
1805 N. W. Thurman St.
Portland 9, Ore. Phone: CA 7-0606

BUYERS GUIDE and CLASSIFIED SECTION

BUSINESS OPPORTUNITIES

LUMBER COMPANY, E. Cen. Ala. (Whitle. & ret.) Ideal loc.—5 car RR spur! - R.E.! 4 trucks. $150,000 Gross. No retail competition. Dept. No. 8375.

LUMBER TRUCKING, No. Calif. Over $100,000 in trucks & eqpt! Est. assets, for 3 yrs! Timber croplands —2,240,000 acres! $80 rent—bldg. & land, 250' x 400'. 6 employees. $140,000. Dept. No. 23999.

SAW & PLANING MILL, No.W. Calif. $18,949 profit! Redwood timber area! Compl. A-1 eqpt! 7 acres & 7 yr. reas! Expansion oppty. Illness. $75,000. Dept. 24016.

CHAS. FORD & ASSOC., INC.
6425 Hllywd Bl., Los Angeles, Cal.

UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT, AREA 1, Portland, Oregon. Notice of Public Hearing for the continuation or revocation of Secretarial Orders Numbers 2285 and 2380 to 2390, inclusive, respectively dated December 11, 1946 and November 29, 1947, relating to the establishment of certain marketing areas for timber located on Revested Oregon and California Railroad and Reconveyed Coos Bay Wagon Road Grant Lands in Oregon. Notice is hereby given that pursuant to the authority vested in the Secretary of the Interior by the Act of August 28, 1937 (50 Stat. 874) and the regulations thereunder, a public hearing is scheduled for 9:00 A.M., P.S.T. March 1, 1957 at the Interior Department Auditorium, Interior Building, 1001 N.E. Lloyd Boulevard, Portland, Oregon, to consider whether marketing area requirements now affecting sales of O&C and CBWR timber shall be continued or revoked. Secretarial Orders covering marketing area requirements to be considered at public hearing are as follows:

Order No. 2285, December 11, 1946, as amended March 9, 1954, and June 14, 1956, establishing the Siuslaw Master Unit and appurtenant Marketing Area.

Order No. 2380, November 29, 1947, as amended March 9, 1954, establishing the Alsea-Rickreall Master Unit and appurtenant Marketing Area.

Order No. 2381, November 29, 1947, establishing the Klamath Master Unit and appurtenant Marketing Area.

Order No. 2382, November 29, 1947, establishing the Jackson Master Unit and appurtenant Marketing Area.

Order No. 2382, November 29, 1947, establishing the Josephine Master Unit and appurtenant Marketing Area.

Order No. 2384, November 29, 1947, establishing the South Umpqua Master Unit and appurtenant Marketing Area.

Order No. 2385, November 29, 1947, as amended June 14, 1956, establishing the South Coast Master Unit and appurtenant Marketing Area.

Order No. 2386, November 29, 1947, establishing the Douglas Master Unit and appurtenant Marketing Area.

Order No. 2387, November 29, 1947, establishing the Clackamas-Molalla Master Unit and appurtenant Marketing Area.

Order No. 2388, November 29, 1947, as amended March 1, 1956, establishing the Columbia River Master Unit and appurtenant Marketing Area.

Order No. 2389, November 29, 1947, establishing the Santiam River Master Unit and appurtenant Marketing Area.

Order No. 2390, November 29, 1947, establishing the Upper Willamette Master Unit and appurtenant Marketing Area.

A map showing the area under consideration is available for public inspection at the offices of the Bureau of Land Management located in Portland, Salem, Eugene, Roseburg, Coos Bay and Medford.

The hearing will be open to all interested persons.

Written briefs, statements or documents to be presented at the hearing should be submitted to Mr. James F. Doyle, Area Administrator, 1001 N.E. Lloyd Boulevard, Portland, Oregon, prior to commencement of the hearing. At the conclusion of the hearing, all minutes, briefs, statements or documents, together with the recommendations of the hearing officer will be forwarded to the Director, Bureau of Land Management, for decision. James F. Doyle, Hearing Officer.

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

STAR VALUES

PLANERS—MATCHERS & MOULDERS

Used Newman 500, 6" x 14" planer-matcher, 6-knife, ball bearing, no profiler, rebuilt.
New Newman M-512 8" x 16" planer-matcher, 8-knife, ball and roller bearing.
New Newman M-510 6" x 14" planer-matcher, 6-knife, ball and roller bearing.
New Newman M-48 6" x 16" planer-matcher, 4-knife, ball bearing.
Used Berlin No. 94, 6" x 15" planer-matcher, 6-knife.
Used Newman 88 4" x 14" planer-matcher, ball bearing.
Used Vonnegut 4" x 6" electric ball bearing moulder.

FILING ROOM EQUIPMENT

Used Type NT Rogers 134" automatic knife grinder, motorized, ball bearings.
New Newman G-232 hydraulic knife grinder.
New Newman G-132 straight knife grinder.
New Newman G-16 sidehead grinder.
New Newman G-71 sidehead grinder.
Used Hanchett 6" to 14" bandsaw grinder.
New Acme circular saw sharpener.

BAND AND CIRCULAR SAW MILLS

New American No. 1 Saw Mill, right hand.

BAND RESAWS—BAND RIP SAWS

New E-52 Turner 52" vertical band resaw, left hand.
Rebuilt Fay & Egan 60" vertical band resaw, left hand, anti-friction bearings.
Used McDonough 44" vertical band resaw, left hand.
Used R-42 Turner twin 42" band resaw, ball bearing, two 25 HP motors, two HP variable feed.

SAW MILL EQUIPMENT

Rebuilt PSMD No. 2 (No. 45) hog, roller bearing.
New Diamond No. 135 hog.
New Schurman 6" x 54" stub edger, L.H.
Used Sumner 8" x 54" stub edger, L.H.
New Miner 4" x 30" table edger, L.H.

WOODWORKING MACHINES

Used G. M. Diehl No. 75 glue joint straight line rip saw, ball bearing.
Used No. 120 Greenlee 8" x 36" double surfacer, ball bearing, direct connected.
New G. M. Diehl No. 750 glue joint straight line rip saw.
Used Whitney No. 32 6" x 30" single surfacer, ball bearing, direct motor drive.
Used Newman No. 600 24" x 8" single surfacer, 5 HP, ball bearing.
New Newman S-830 30" x 8" single surfacer, 7½ HP.
Used Model LRS California self feed ripsaw, ball bearing, 20 HP.
Used Yates 8-5 36" x 8" single surfacer, ball bearing, 20 HP direct motor drive.

STAR MACHINERY COMPANY

SPOKANE
E. 415 Sprague Avenue
Riverside 7-6121

SEATTLE
241 Lander Street
ELliott 0760, Ext. 15.

PORTLAND
801 S. W. Front Ave.
CApitol 8-7395

REVISED LIST

LIQUIDATION

Bay City Lumber Company — **Aberdeen, Washington**

By GOLDSTEIN & BLOCH

P.O. Box 33 — Ab. 1234 — Phone at Millsite Ab. 235

Sawmill Capacity 200 M

MAIN SAWMILL

Log Haul, 1¾" x 10" chain, 431'
Log Kicker, 16" x 36" cyl., 4 arms
Log Stop, 18" x 22" cyl., 3 arms
Log Turner, 12" x 84" cyls., 5–15 x 33'
Lift Skids, 12" x 24" cyl.
Carriage, 72" screw blocks with snubbers
Feed Engine, 14" x 18", camel back
Band Mill, 10' Allis R.B., type B
Band Drive, 300 HP, 600 RPM, 3 bearing
Pony Carriage, 54" opening, R & P
Pony Feed, 14" x 18" direct
Pony Mill, 8' Allis R.B.
Pony Drive, 200 HP, 505 RPM, 3 bearing
Edger, 8 x 66 R.B. Prescott
Slasher, 10 saw with 75 HP motor
Trimmer, 42" Allis air with 100 HP motor
Resaw, 84" Mershon, L.H.
Resaw, 66" Mershon, L.H. with 75 HP motor
Bolter Saw, Mfg'd Portland Iron Works
Hog, No. 45 Diamond S.B. with 75 HP motor
Dragsaw, 6' blade, 24" stroke
Sliding Saw, 48" circ. saw with 15 HP motor
No. 150 L Covel grinder with 72" clamp
No. 150 L Covel grinder, motorized, with 72" clamp
No. 95 Covel circular saw grinder

PLANING MILL

No. 94 Berlin 6 x 9, 6-knife planer
16 x 20 Stetson Ross Sizer
1–No. 26 Irvington electric trim saw

Planing Mill Capacity 200 M

17A1 Stetson Ross 6 x 15 all elec. planer 8 and 10 knife, 505 E feed table
Load Lifter, 5 arms, tilting, break down
Swede, Manufactured by Moore

POWER HOUSE

Turbine, 500 KW, 2300 V. Allis
Turbine, 1000 KW, 2300 V. Allis
3–200 KVA transformers, 2300/440/220 V
3–100 KVA transformers 2300/440 V
700 HP 250 lb. W.P. PSMD code boiler
Ray burner 400 HP, turbine driven
De Laval centrifugal turbine driven boiler feed pump

YARD EQUIPMENT

75,000 gal. water tank on tower
Stiff leg crane, 60' steel boom
Brute crane, 80' boom, 4 ton capacity
Hyster M2 carrier, 42" package
Hyster M3 carrier, 42" package
500–42" carrier blocks

MISCELLANEOUS

1240' - 24" rubber conveyor belt
144 troughing rolls, ball bearing
24" G & E crank pin shaper
36" x 20' bed Hamilton lathe
100 lb. Little Giant power hammer
300 lb. steam hammer
50 lb. "Modern" power hammer
2 ton electric hoist 440 V., P & H
860' - 1⅛" strand trans. rope, new

MANY MORE ITEMS NOT LISTED

Call or write for details and prices on the above. If you don't see what you are looking for, we probably have it, but forget to list it.

CALL or WRITE

GOLDSTEIN & BLOCH
Aberdeen, Washington

FOR SALE

1—G K Straight Wheel Knife Grinder. 38" Acme Bar, Complete with 2 motors. Good condition. Price $800.00.

WILDER SAW WORKS
2320 Ventura Ave., Fresno 1, California
Phone: Day - ADams 7-1486; Night - BAldwin 7-6545

Your Attention

LUMBER - PLYWOOD & PULP MILLS

We are now Distributors for "Clark - Electric Controls"

Starters, Disconnects, Air Circuit Breakers, Limit & Master Switches

Moffett Engineering Co.
Bridge Cranes, Standard & Heavy Duty, Gantry Cranes

Johnson Mfgr. Co.
"Seattle" Cant & Log Gangs, "Seattle" Box & Pencil Shook, Gang 5/32 to 1" thick

FACTORY AGENT
"Nopak"
Cylinders & Valves
Standard Sizes — **Portland Stock**

MONARCH FORGE & MACH. WKS.
Band Mills, Resaws, Carriages, Trimmers, Ring Barkers, Line Bars, New Installations, Sawmill and Planing Mills, Engineered & Supervised, Mechanical & Electrical

Caldwell Machinery Co.
EXPERIENCE - SERVICE - ECONOMY
738 N.W. Glisan St., Portland 9, Ore.
CA 8-1565 and CA 8-5348 Res. NE 6-4454

USED EQUIPMENT FOR SALE

JACKSON VENEER LATHE — Serial No. 1138 Model F.R.B. Hoist Included. 66½ Knife 42" Swing 34" Minimum Length 5" Spindle Hydraulic Controlled. 75 HP Motor AC-DC Drive, 10 HP Motor on pump. 14 Back Rolls—2 9/16, 2⅞, 3½, 3 9/16, 3¾, 3⅞, 4, 4½, 4⅝, 4⅝, 5⅝, 6, 7½, 10 & 15.

VENEER EQUALIZER — Maximum cut—90". 6 Saws, Roller Chain Feed, Individual 3 HP Motors, 1 HP Master Motor Drive.

VENEER RIP SAW—36" Multiple Rip—Ball Bearing Arbor Direct Connected to 25 HP Motor, 3600 RPM.

VENEER RIP SAW—38½" Multiple Rip, Chain Feed, 30 HP Motor, Flat Belt Drive.

VENEER RIP SAW — 24" Luther Multiple Rip, Ball Bearing Arbor, 15 HP Motor.

VENEER RIP SAW—24" Multiple Rip, Direct Drive to 20 HP Motor, 3600 RPM, Babbit Bearings.

YATES EDGING & RIPPING SAW—Model G-2, Serial No. 36302. Gear Drive to 50 HP, 220 Volts.

PRINTING PRESS—Morgan 24" 2 Color Box Board No. 370-6, Hopper and Chain Feed, 5 HP Motor, 220 Volts.

PRINTING PRESS HOOPER—Box Board Printer, 37" x 54" Model A2C, 2 Color, Chain Feed, 5 HP Motor.

MORGAN NAILING MACHINE—48" Model 20 Open Back 20 Track Geared Motor Drive, 5 HP Westinghouse Motor.

MORGAN NAILING MACHINE—40" 16 Track Open Back Geared Motor Drive, 5 HP.

MORGAN NAILING MACHINE—26" Model 10, Open Back 10 Track Gear Drive, 5 HP Motor.

MORGAN NAILING MACHINE—26" Model 9, Open Back 9 Track, 5HP, 220-440 Volt.

MORGAN NAILING MACHINE—26" Model 10, Closed Back 10 Track No. 9638, 3HP Motor, 220 Volt.

BORING MACHINE—Monical Machine Works, 2 Spindle 7½ HP, 220-440 Volts.

JENKINS CLEAT TENNONER (MITER)—Model 95, 2 Angle Cope Motor-Drive, 2-5 HP G.E. Motor, 84" Opening, 2—3 HP Motors, 1—5 HP Chain Feed, 220 Volts.

MEREEN JOHNSON GANGRIP SAW—Serial No. 5322. Directed Connected to 50 HP U. S. Motor, 220-440 Volt.

4—PUSH CUT OFF 5 HP MOTORS—Roller Type Push Cut Off Saw.

1—PUSH RIP SAW—Steel Frame, 14" Blade, 5 HP U.S. Motor 220-440 Volts.

1—PUSH RIP SAW—Wooden Frame, 12" Blade, 3 HP Motor, 220-440 Volts.

YATES DOUBLE END TENNONER—Model No. 229, 36" 1-3 HP Feed, 220 Volts, 2-5 HP Sterling, 220 Volts, 1-5 HP Dayton Motor, 220 Volts.

EDGEMORE BOILER—Water Tube, 500 HP, 248 Horizontal Tubes, 100 Ft. x 48 Inch Stack. Pump and Controls.

75 Assorted Electric Motors 220 & 440 Volts, 5 to 200 HP.

THE LEON REALTY COMPANY
P. O. Box 551, Whittier, Calif.

SCOUGAL RUBBER MANUFACTURING CO.
WE CAN MANUFACTURE ANYTHING OF RUBBER
2731 First Ave. So. Seattle, Wash.

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

LIQUIDATING SASH and DOOR PLANT
Tacoma, Washington

All Machinery and Equipment Now For Sale

Complete equipment for sash, doors, flush doors. Tenoners, moulders, sanders, door clamps, Kval saw, Kval butt planer, fork lifts, lumber carrier, mortisers, stile and rail borers, Jenkins 3-in-1, rip and straight line saws, hydraulic press and glue roller, shapers, stickers. Approx. 40 tons Diamond floor plate.

Contact GEORGE KATICA
3376 Lincoln Ave. • Market 0846 • Tacoma, Wash.

Don't Blow Your Brains Out!

Wire — Phone — Write

BADER & CARROLL

FOR NEW AND USED

Sawmill and Planing Mill Equipment

HEAD RIGS
1 6' Yates-American anti-friction bearing, L.H.
1 9' Allis babbit bearing band mill
1 9' Allis roller bearing band mill
1 9' Filer & Stowell babbitt bearing band mill
Steel circular husks with top and bottom ball bearing arbors, chipper arbors complete with saws and belts. Several spare circular saw arbors, various sizes.

CARRIAGES
1 Monarch 4-block, steel frame, 66" opening, air dogs, electric taper attach., electric setworks
1 3-block, 72" opening, screw type electric set, steel frame
1 4-block, 60" opening, screw type, Johnson No. 5 electric set, timber frame
44" rack and pinion blocks
48" rack and pinion blocks
48" screw blocks
72" screw blocks
Allis No. 3 electric drive
Allis No. 4 electric drive
Andrus electric drive with column and dial
Andrus setworks light pattern for gas or electric drive
Assorted locks, setworks and other parts necessary for building carriage

EDGERS—Table Type
1 4x32 Wheland, with steel tables
1 4x36 Tower, 3-saw, wood tables
2 5x42 Tower 4 saw, with tables, NEW

EDGERS—Stub Type
1 Portland Iron Works, 4x30, 2-saw
1 Fabricated 6x30, 2-saw
1 Tower 6x32, 2-saw
1 Salem 6x40, 3 gang saws, 3 moveable, new
1 Fabricated steel 6x48 with 4 saws, gang type for 2", and 4 moveable
1 Albany 6x48, 5-saw
1 Portland Iron Works, 6x48, 4-saw
1 Sumner 8x60, 5-saw
1 Portland Iron Works, 12x60, 6-saw

EVERYTHING FOR planing mill and sawmill
Diesel Engines
Electric Motors — Pumps
Deck Machinery
Transfers — Conveyors — Rolls
Shafting — Bearings — Pulleys
Chain — All Type
Send us your inquiries for prompt quotation and shipment

SPECIALS NOW IN STOCK

PLANING MILL EQUIPMENT

Large stock good used heads, Disston, Jones & Orth, and Philbrick.

MOULDERS
1 Levi Huston 4x9 4-head, babbit bearing
1 Woods No. 702B 6x15 5-head, babbitt bearing
1 Berlin No. 108 6"x12" 4-head machine, 6-K top, 4-K bottom, 6-K sideheads, belt driven
1 Bamford Premier 6"x4", 6-K, motorized

PLANERS
Woods No. 404C, 6"x24", 8-knife with splitter, motorized ball bearing sideheads
1 Berlin No. 94X, 6x15, 6-knife round heads
1 Woods 404B, 6"x15" 8-K with motors and feed table
1 Stetson-Ross 4A4 16"x20" 6-K belt drive with steel frame feed table
1 Yates No. 92 6"x15" 8-knife double profile, feed table, blower system, chains, etc.
1 Yates No. A4 6x30 6-knife, round heads
1 Woods No. 404 6x15 8-knife, with top and bottom profiles
1 Woods No. 10 12x30 4-knife, square heads
1 Berlin No. 41 14x30 4-knife, square heads
1 Berlin No. 10, 10x20, 4-knife
1 Stetson-Ross No. 4A4 24x30 4-knife, round head, motorized side heads

HANDLING EQUIPMENT

1 ¼-yd. Quick-Way Crane mounted on GMC 2½-ton truck with back hoe and 30' crane boom — reconditioned.

3 Hyster 54" carriers
2 Hyster 42" carriers
2 Hyster Space Saver lift trucks, Model YT4
1 Ross 14HT 52" forks, 16,000 lbs.
1 Shurman Model DDH50 with Ford V-8 power plant, factory unit
1 Star hammerhead gantry crane, 70 ft. boom, 4-ton lumber handling type
1 Gerlinger carrier, 42" pkg.
1 Ross Model 70 rebuilt
1 Clark Clipper 2,000 lb.
1 Clark Carloader, 4,000 lb.
2 Yates, Model KM4L, 4,000 lb., battery operated

POWERHOUSE EQUIPMENT
1 only Westinghouse 1500-kva 2400-volt steam turbine

RESAWS
1 American No. 4, circular, anti-friction bearing, tilting rolls
1 Blue Babe 54", L.H., air setworks, anti-friction bearing
1 Mershon 66", L.H.
1 Berlin H6 horizontal with divided infeed and outfeed bed, hydraulic lift
1 Mereen-Johnson 54" used, ball brg. with line bar, left hand
1 Clement 54", feed roll type, left hand
1 Berlin 64", lever set, left hand
1 New Carroll circular, 34" blade, 16x12 opening
1 Berlin 54" L.H. ball brg. overhead flex shaft feed roll drive

POND & DECK SAWS
2 S & W Master drag saws, 30" stroke with 10' blades, elec. motor or gas engine drive

SPECIAL — FOR COLD DECKING
1 Hi-line unit complete with 1¾" Skyline - blocks - tree shoes - guylines - poles - dble. drum donkey with Cadillac engine hydro drive.

We have other units available, write for description.

SURFACERS
1 American No. 4½ 7"x30"
1 Whitney No. 24, 6x24, motorized, ball bearing, 4-knife round head
1 American No. 444 8x36 3-knife round head motorized

HOGS & CHIPPERS
1 Diamond No. 25
1 Phoenix No. 36
1 Hesse 64" BB, chipper

Wire — Phone — Write

BADER & CARROLL

122 S.W. FIRST AVENUE • Phone CA 2-1013
PORTLAND 4, OREGON • or CA 3-8501

BUYERS GUIDE and CLASSIFIED SECTION

440 VOLT MOTORS
200 HP 600 rpm GE
150 HP 1200 rpm GE
100 HP 720 rpm GE
100 HP 900 rpm GE
75 HP 600 rpm GE

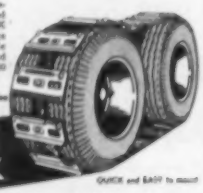
CASCADE MACHINERY COMPANY
4600 E. Marginal Way, Seattle 4, Washington
Rainier 8500

CONTRACTORS TRUCKERS DRILLERS CRANE OPERATORS
READY-MIX TRUCKERS LOGGERS MINE OWNERS PIPE LAYERS

CONVERT YOUR Rubber-Tire EQUIPMENT
to CRAWLER PERFORMANCE
Save 50%-ACT NOW!

MUD — SAND — SNOW — SWAMPS won't stop you! Flotation is increased 500%, and Traction 900%. TRUCK TRACK fits small as well as large tire sizes. Prices for single axle sets as low as $240.00 and for Tandem Axle sets, $408.00 F.O.B. Cleveland, Ohio.

Durable Drop Forged Steel Construction Interchangeable



TRUCK TRACK

QUICK and EASY to mount

Send for Literature and FREE ESTIMATE

TRUCK TRACK SALES COMPANY
Div. of Gentle Co.
3327 Broadway Ave. Cleveland 15, Ohio Phone UT 1-7373

For Your New All Steel Sawmill or Industrial Plant,

Engineered, Supplied and Erected

call

RAY PARKER MACHINERY SALES CO.

607 Portland Trust Bldg. • Portland 4, Oregon

CA 3-8955
CA 2-1011

Leasing Available for Partial or Complete Plants

FREE TIMBER VIRGIN PINE

We will give you $500,000 worth of VIRGIN Ponderosa Pine Timber in Mexico; good logging; if you will put up $50,000. cash to assist us in financing this project. GET UP A POOL. You can buy more timber, if you like. We have FIVE BILLION FEET. We do not have to pay for timber now.

W. E. McCLURE
405 Columbia Drive, D. I. Tampa 6, Fla.
Phone 827 101 day or night

FEDERAL PIPE & TANK CO.

Wood Pipe
2 inches to 16 feet diameter.
Wood Tanks
100 gallons to 500,000 gallons capacity.
6851 East Marginal Way
RA. 0582 Seattle, Wash.

SPEE-D-TWIN STEAM FEED

helps the small and medium size sawmill to make a profit through GREATER PRODUCTION without increased expense.

Uses no more steam than belt or friction feeds. Less expensive to operate. Much faster. Full details in Catalog W. Yours for the asking.

SOULE STEAM FEED WORKS
MERIDIAN, MISSISSIPPI

THE LUMBERMAN GIVES ADVERTISERS More Effective Readership

GARDNER HYDRAULIC SHOTGUN FEED WORKS

Proven in 52 Western installations.

- Package unit—install in few hours.
- Oil adequately cooled—no water required.
- No oil leak problem—Fire hazards eliminated.
- 30 to 150 HP—will handle up to 65M day.
- Pump & Valves — immersed in oil within reservoir—to reduce wear & maintenance.
- Smooth action—positive feel.

IT'S REALLY FAST!

Write for details & list of users

THE PORTLAND MACHINERY CO.
208 SW First Ave., Portland 4, Ore. Phone CA 8-9633

"When you think of machinery think of Portland Machinery."

Announcing

REVOLUTIONARY NEW NEILS KNOT SEALER

Secures Black Knots in Boards—at a Big PROFIT!

The Neils Knot Sealer has been operating in actual lumber production for several years in several American and foreign mills.

Write, Wire or Phone for Western Pine Ass'n. Report "Effect of Knot Gluing on Grades"

WESTERN MACHINERY CORP.

1035 S. E. 9th Ave. Portland 14, Oregon

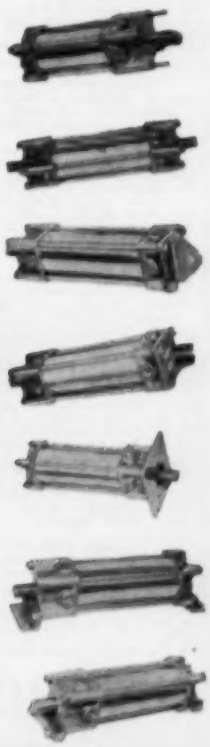
Core Veneer Plant FOR LEASE Ample Timber

Interested Parties, Contact:
REDDING VENEER & BOX COMPANY
Phone 1165, P. O. Box 561
Redding, California

By advertising in **The Lumberman** you are able to communicate with your customers and prospects in an atmosphere that is natural to them and most productive for you. In this respect, today's reliable business press serves a purpose not duplicated or equalled by any other selling force.

Specialists:

Air and hydraulic cylinders and valve applications, supply of superior component parts—for air and hydraulic systems. AIR AND HYDRAULIC CYLINDERS, 2" dia. to 16" dia. standard dimensions, also special cylinders. CONTROL VALVES, 2/way, 3/way, 4/way, manual, solenoid and pilot operated.



Filters, Regulators, Lubricators . . . Speed Control, Check and Needle Valves . . . and Any and All Components . . . for Air & Hydraulic Systems.

Let Us Help You With Your Applications

Write for Bulletin 306 A

3-way in line Master Value

JOHN M. O'BRIEN COMPANY
7008 No. Interstate Ave.
Portland 17, Ore.
BUtler 5-4444

WHISTLE SIGNALS

The most practical whistle for all normal uses. Larger sizes with deeper tones for special applications.

SIZE 1-A WHISTLE WITH ELECTRIC VALVE

Cunningham Air Whistles

6200 WEST MARGINAL WAY • SEATTLE 8, WASH.

"WHISTLING FOR OVER 30 YEARS"

KLIEVER DECK SAW

Has 12" of Travel for Centering Saw to the Log Lengthwise.

Cut Your Logs With Precision & Speed Eliminates Waste

Write for Complete Information to Manufacturer

Kliever Machine Co.

130 N. Front PH—2-4435

Medford, Ore.

Cracked Cylinder Heads Re-Annealed Restored to Like-New Condition Exchange Service

See Your Jobber or Tractor Distributor

Northwest Motor Welding

3063 N. Michigan, Portland 12, Ore.
Phone ATlantic 8-5496

Engineering Development Corp.

1009 East Pike, Seattle 22, Wash.
Portland Phone: BE-5-0556 Seattle: CA-2000

Our 57th Year of Dependable Service For You

EDGERS

New 6" x 54" Scharman—Just Received
Used 6" x 60" L. H. Table Edger BB
Used 4" x 32" Wheland 3 saw BB table edger
Used 4" x 36" Newport BB table edger
Used 8" x 60" Allis LH roller brg. stub edger
Used 4" x 42" BB Newport stub edger
Used 6" x 42" Barton stub edger
Used 12" x 84" Sumner edger, divided rolls
Used 6" x 30" Hoage stud edger
Used 4" x 32" American 3 saw stub edger
Used 4" x 30" Enterprise 3 saw table edger
Used 8" x 48" Evergreen bb dbbl. roll stub edger
Used 12" x 72" Sumner, split rolls—200 HP motor
Used 6 x 42" Dbble Rolls, ball bearing
Used 8 x 48" Dbble Rolls, ball bearing
Used 3 saw BB Vertical edger

HOGS AND CHIPPERS

New Diamond No. 25 hog
New Diamond No. 135 hog
New Diamond No. 145 hog
Used No. 35 Diamond Hog
Used No. 38 Diamond Hog
Used No. 35 Puget Sound Hog
Used No. 40 Diamond Hog
Used No. 45 Puget Sound Hog—BB
Used No. 45 Diamond Hog
Used No. 45 Sumner BB Hog
Used No. 35 Diamond Chipmill
New Diamond No. 145 Chipmill
Used 66" Sumner Chipper—roller bearing

PLANERS—MOULDERS—SURFACERS

Used No. 404 DM S. A. Woods 6 x 15 Electric 8-knife planer-matcher with profile
Used No. 512 Newman 6 Knife, 8 x 16 Planer, dbbl profile
Used Hermance 5 x 25 Surfacer
Used 490 Fay & Egan Surfacer
Used No. 100 Hoage 5" x 15" BB Pony Planer
Used American No. 77 8-knife BB planer
Stetson Ross No. 4 16 x 30 Timber Sizer
Used Berlin No. 93 6 x 30 6-knife matcher
Newman No. 99 6 x 15 6-knife planer-matcher
New Marathon 4 x 13 BB planer-matcher
Used No. 118 Berlin 6" x 15" planer
Used planer feed table
Used 4" electric moulder-frequency changer
Used 4" Smithway electric moulder
Used No. 696 Faye & Egan Shop Type Planer Moulder Matcher—Like New

RESAWS & RIP SAWS

Used 72" Yates VR 6 Horizontal Resaw
Used 72" Yates VR 6
Used 54" Worshop, anti-friction brg. tilt rolls
Used 54" Berlin resaw, screw set
Used 38" Trojan circular resaw BB 7x14 cap.
Used 36" No. 2 Faye & Egan BB circular resaw
Used 42" J. A. Fay & Egan band rip saw
Used 42" Cordesman band resaw
Used 40" No. 4 band scroll resaw
Used 84" Worshop resaw, sawmill type, quick set
American No. 2 self-feed circular rip saw
Used No. 0 American rip saw
American Circular Resaw

NEW AND USED PUMPS

Used 6 x 4 x 6 Worthington Duplex boiler feed
Used Worthington 4" Centrifugal—1000 GPM
Underwriter approved Firepumps—many sizes
Boiler water feed pumps—New & Used
Used 5" x 6" Fairbanks Centrifugal pump—500 GPM
Used 12" x 12" Westinghouse Centrifugal pump — 3000 GPM
Used 8" Jeansville 2 stage Centrifugal pump—2000 GPM New & Used Levelling Blocks

COMPRESSORS

33 cu. ft. New Worthington air cooled
43 cu. ft New Worthington air cooled
65 cu. ft. New Worthington air cooled
122 cu. ft. Used Worthington air cooled
194 cu. ft. New Worthington air cooled
198 cu. ft. Used Sullivan air cooled
311 cu. ft. Used Ingersoll Rand water cooled
324 cu. ft. Used Ingersoll Rand water cooled
385 cu. ft Used Worthington air cooled
465 CFM New Worthington water cooled
500 cu. ft Used Ingersoll Rand water cooled
750 cu. ft. Used Chicago pneumatic water cooled

HOISTS AND CRANES

Used Shaw Box 2 Ton Hoist—geared trolley
Used single drum 6" x 15" spool
Used 5 ton Hesse Ersted single drum hoist—like new
Used American dbl. drum 24 x 24, 40 HP
New Budgit hoists in stocks
2 ton and 5 ton hand winches in stock

SHOP TOOLS

Used Oster pipe & bolt threader
Radial drills & Bench drills
8 x 16 Racine hydraulic back saw
Kempsmith geared Maximiller
10 x 36 quick change lathe
16" Sawmill Type Lathe—Bargain

MISCELLANEOUS

Used Stetson Ross 54" swing saw—BB
Used Hesse-Ersted 6 HP motorized saw arbor
American Columbia 48" oscillating 3 drum sander
Used Irvington 60" arm swing saw
Berlin 30" 3 drum sander
Used Morgan Box board matcher
Merson Johnson 20" precision trim & printer
36" Crescent ball bearing band saw
Used Yates 36"—3 drum sander

FEED WORKS

Gardner Hydraulic Shot Gun—on order
Used Wheland 5" belt feed
Used 5 x 6 SpenDoo Twin feed
Used 16 x 18 Allis steam twin feed, self-contained
Used 3" hydraulic shotgun

LOG AND CANT GANGS

Used 28" Wehrhahn Log Gang, complete, many extras
Used 34" Mill Engineering log gang, air carriage
Marathon No. 200 gang saw, 13 x 20, for cants
Marathon No. 120 gang saw, for logs or cants
Linck gang saw for logs or cants, 22 x 22—in stock
Linck gang saw for logs or cants, 28 x 28—in stock
Marathon No. 300—28" x 28" gang saw
Marathon No. 400—14" x 28" gang saw

FILING ROOM EQUIPMENT

New Armstrong No. 4 Stretcher Roll
New Armstrong No. 4 Band Saw Grinder
New Armstrong No. 54 Circular Saw Gummer
Used Armstrong No. 6 Band Saw Grinder
Used Armstrong No. 16 Circular Saw Grinder
New Marathon Gang Saw Grinder
Used Covel No. 140 automatic Band Saw Grinder
Used Covel No. 83 24" Gang Saw Grinder
Used Covel No. 217 HH Band Saw Grinder
Used Covel No. 90 LH Band Saw Grinder
Used Covel No. 150 RH Band Saw Grinder
Used Covel No. 109 Stretcher Roll 16" capacity
Used Hanchett No. 250 LH Band Saw Grinder
Used Hanchett No. 948 Circular Saw Grinder
Used Hanchett No. 724 56" auto. circular Saw Grinder
Used 12" Welding Clamp

KNIFE GRINDERS

New Andrus abrasive belt, 32" knife grinder
Used 36" Fay & Evans No. 253 automatic knife grinder
Used American 30" knife grinder
Used American 32" straight wheel knife grinder
New Dependable No. 99A5 36" motor drive, automatic knife grinder
New Dependable No. 101A sidehead grinder
New Defiance 38" motorized automatic knife grinder
Used Dependable 101A side head grinder
Used Berlin 275—36" Automatic knife grinder
Used Rogers 90" Knife Grinder

MILL EQUIPMENT

Used Tower 1 man, 2 saw trimmer 8'—16'
Used Cornith 1 man, 2 saw trimmer, 8' to 20'
New Wheland 1 man 2 saw trimmer, electronically controlled
Used 2-arm Log Stop & Loader, 36" arm, 12 x 16 cyl.
Used 3-arm Log Stop & Loader, 42" arm, 16 x 20 cyl.
Used 20' Portland Iron Log Turner
4—Used Garlinger Carriers 42"
New Willamette Iron Works Swede—rubber rolls
Steel Deck with flippers
Used 10" x 12" full oscillating Nigger

HEAD RIGS AND CARRIAGES

Used 6' Union Iron Works band mill
54" Berlin Pony band mill, 7" blades
6' Yates band mill, all cast, LH
9' Union band mill, roller bearing, RH
Used 8' McDonough Bandmill
Used Monarch 3 block carriage, Andrus set
Portland Iron Works 60" opening headblocks
No. 4 Trout Set Works for screw block
Sumner Iron Works 3-block R & P 36" opening, tapers
54" opening screw type headblocks
3 Sumner 72" opening headblocks
Used Steel husk with vertical edger

MOTORS

Used 250 HP 600 RPM slip ring & controls
New 150 HP 1200 RPM SB Allis-Chalmers
New 100 HP 1200 RPM BB Allis-Chalmers
Used 75 HP 1200 RPM SB General Electric
Used 25 KVS Westinghouse w/controls
New 750 Watt gas driven generator
Sawmill type gearmotors and reducers, 3 to 10 HP
Large stock of used motors—all sizes

ENGINES & BOILERS

671 GMC Diesel
Caterpillar Diesel Engine D8800
Caterpillar Diesel Engine D13000
New 20 HP Diesel Engine FM
11 x 12 Ames Center Crank 48 x 12 pulley
62" x 20" 100 HP Code Boiler, 195 lb.
54" x 14" HRT, ideal for dry kiln
72" x 18" 160 HP Code Boiler 150 HP

Agents for DIAMOND IRON WORKS—Fuel Hogs and Chipmills. GARDNER—Hydraulic Carriage Feed & Log Deck. SCHURMAN MACHINE WORKS — Edgers, Hoist. WORTHINGTON CORPORATION—Compressors and Pumps. WHELAND COMPANY—Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. IRVINGTON—Trim Saws. ARMSTRONG MFG.—Filing Room Equipment. DEPENDABLE—Knife Grinding Equipment and Moulders. ALLIS-CHALMERS MFG.—Motors, Controls, Drives. COMET—Radial Arm Saws. DAVIS & WELLS—Woodworking Machinery. BEGE — Hydraulic Log Turners. P&H—Hoist. BINKS MFG. — Spray Equipment. MARATHON—AND LINCK GANG MILLS. DELTA—Power Tools.

THE PORTLAND MACHINERY COMPANY

"When You Think of Machinery, Think of Portland Machinery"

208 S. W. First Avenue Portland, 4, Oregon Phone CApitol 8-9633

The LUMBERMAN'S Advertising Index for February 25, 1957

These advertisers BELIEVE in the forest industries and are well prepared to serve you.

A

Acme Steel Company 30, 31
ABCO-PACIFIC, Inc. 142
Aeroquip Corporation 117
Albany Machine & Supply Co. 144
Allied Northwest Machine & Tool Corp. ... 141
Allis Chalmers Manufacturing Co. 88, 89
Anderson Blowpipe & Mfg. Co. 145
Archer Blower & Pipe Co. 141
Auto Car Div. White Motor Co. 6

B

Bader & Carroll 151
Baier & Associates, L. S. 147
Balden, F. E. 148
Baldwin-Lima-Hamilton Co., Inc. 12
Benz Spring Company 144
Bio-R-Dry, Inc. 137
Brook Motor Corp. 134
Bruning Co., Inc., Charles 148
Bucyrus-Erie Company 23
Blue Jet Chain Co. 92

C

Caldwell Machinery Co. 150
Cascade Machinery Co. 151
Caterpillar Tractor Co. 2, 26, 69, 72
Chain Belt Company 14
Champion Friction Co. 142
Chapman Chemical Co. 11
Chevrolet Motor Div., General Motors Corp. 80
Clark Equipment Company 65, 113
Coast Neutralizer Corp. 147
Coe Manufacturing Co. 114
Collinson, Del 148
Columbia Pacific Corp. 148
Columbia Rubber Mills 141
Controls & Communications 116
Crosby Laughlin Lebus 123
Crown Machinery Co. 149
Cunningham Mfg. Co. 154

D

Davies, E. C. 141
Diehl Machine Works, Inc., The G. M. 90
Disston Division, Henry, H. K. Porter Co. 118
Dixon Crucible Co., Joseph 86
Dodge Manufacturing Co. 67
Dodge Truck Division Chrysler Motors ... 79

E

Eaton Manufacturing Co. 28
Electric Steel Foundry ..... 4th cover
Engineering Development Corp. 154
Esse Radio Company 136
Euclid Division, General Motors Corp. ... 87
Eugene Equipment Co. 142
Eugene Truck & Machine Co. 147

F

Federal Pipe & Tank Co. 152
Filer & Stowell Co. 111
Forest Product Machinery, Inc. 136
Foster, L. B. 144
Frick Company 83
Fuller Manufacturing Co. 33

G

Gates Rubber Company 93
General Appraisal Co. 139
General Electric Co., Electronics Dept. ... 99
Gerow Finance Co., Doug 141
Goldstein & Bloch 150
Grays Harbor Equipment Co. 149
Greenlee Bros. & Co. 73, 140
Gunderson Bros. Engineering Corp. 129

H

Hessler, Herbert 148
Hillman Company, C. Kirk 148

I

Industrial Development Co. 148
Insley Manufacturing Corp. 101
Instrument Sales & Service Co. 143
International Harvester Co. 91

J

Jeffrey Manufacturing Co. 66
Johnson Engineering Co., I. W. 137
Johnson Manufacturing Co. 140
Johnson Motors 109

K

Katica, Geo. F. 151
Kelton Co., William S. 148
Klamath Iron Works 126, 148
Klamath Machine & Locomotive Works ... 124
Kliever Machine Works 154

L

Laucks Laboratories 138
Leon Realty Co., The 150
Leschen Wire Rope Division H. K. Porter Co. 127
LeTourneau, Inc., R. G. 34, 35
Link-Belt Speeder Corp. 13
Lubor-Finer, Inc. 122

M

Mack Trucks 22
Macwhyte Company ..... 3rd cover
Mar Hook & Equipment Co. 141
Mater Machine Works 140
McClure, W. E. 152
Medford Machinery Co. 148
Mill Engineering & Supply Co. 94
Milwaukee Machinery Co. 143
Minder Chain & Gear Co., J. W. 136
Modernair Corporation 82
Moline Malleable Iron Co. 100
Moore Dry Kiln Co. 125

N

Nashua Manufacturing Co. 131
National Machinery Sales 146
Newman Machine Co. 21
Nichols Boat Works Co. 143
Nicholson File Company 81
Nicholson Manufacturing Co. 148
Northwest Chains & Sprockets, Inc. 142
Northwest Engineering Co. 115
Northwest Marine Iron Works 128

O

O'Brien Company, John M. 153
Ohio Knife Company 95
Oliver Corporation 32

P

Pacific Saw & Knife Co. 141
Parker Machinery Sales Co., Ray 152
Peters Company, The 130
Peterbilt Motors Company 1
Portland Chain Mfg. Co. 135
Portland Machinery Co. 145, 152, 154
Prescott Company, The ..... 2nd cover

Q

Quaker Oats Company, Chemical Div. 76

R

Rader Pneumatics, Inc. 129
Rambo, W. H. 148
Raybestos-Manhattan, Inc. 68
Redding Veneer & Box Co. 153
Reichhold Chemicals, Inc. 24, 25
Roberts Motor Company 135

S

Salem Equipment & Supply Co. 135
Schield Bantam Company 119
Schultz & Co., Inc., C. D. 139
Scougal Rubber Mfg. Co. 151
Seattle Boiler Works 144
Sedberry Company, The J. B. 133
Signode Steel Strapping Co. 4
Simonds Saw & Steel Co. 8
Skookum Company 138
Smith & Co., D. B. 139
Smith Lumber Co., Ralph L. 129
Smythe Co., Ray 141
Soule Steam Feed Works 152
Soule Steel Company 29
Spear & Jackson, Ltd. 126
Square D. Company 98
Standard Oil Co. of California 16
Star Machinery Co. 150
Stetson Ross Machine Co. 136
Sumter Manufacturing Co. 125
Sure-Seal Equipment 139
Swing-Shift Mfg. Co. 133

T

Texas Company 36
Thompson & Holmberg 148
Timken Detroit Axle Company 102, 103
Truck Track Sales Co. 152
Twin Disc Clutch Co. 104

U

U. S. Borax & Chemical Corp. 96
U. S. Dept. of the Interior, Bureau of Land Management 149

W

Ward Construction Co., M. A. 148
Washington Iron Works 15
Weaver, Charles 141
Western Machinery Corp. 153
Western Ways, Inc. 143
Wheland Company, The 120
Wilder Saw Works 150
Williams-White & Co. 131
Willys Motors, Inc. 85
Wood & Associates, K. B. 148
Wood & Company, R. D. 97
Woods Machine Co., S. A. 78, 137
World Bestos 74, 75

Y

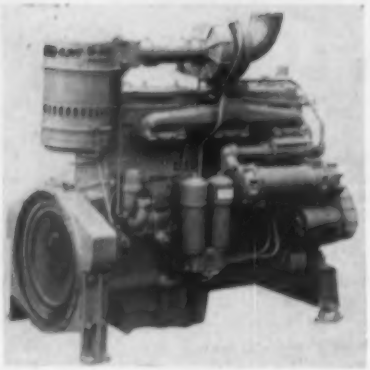
Yates-American Machine Co. 84

Z

Zidell Machinery & Supply Co. 135

First Reports On

New Equipment



TURBOCHARGERS are offered for the new lightweight, compact D318 and D315 Series G Diesel Engines manufactured by Caterpillar Tractor Co. D318 (above) has the turbocharger location at the exhaust manifold.

Turbocharger Offered on New Lightweight Diesels

• Two new engines, suitable for powering portable welders, crushers, pumps, mills and many other machines, have been announced by Caterpillar Tractor Co. They are the D318 and D315 Series G Engines, modifications of the basic D318 and D315. Both these compact and lightweight engines are offered either naturally aspirated or with turbocharger.

Modifications made to reduce the length and weight include: a new timing gear and housing, only half as long as before; a compact air cleaner of increased efficiency in a new position to give shorter, lower engine profile; and former gasoline starting engine now replaced by a 24-volt direct electric starting system.

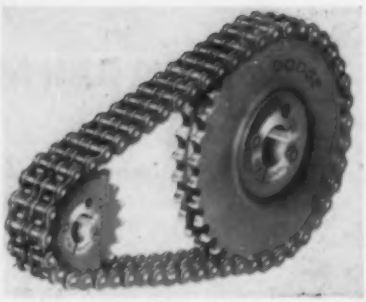
D318 has an over-all length of about 56 inches, 19 inches shorter than the standard model, and a weight decrease of 370 pounds; it develops 137 hp at 200 rpm. Turbocharging increases this rating to 175 hp.

Chipper for South

• A new wastewood chipper with several innovations of design and manufacture by Sumner Iron Works is announced by the factory distributor, Wilco Machine Works, Inc., Memphis, Tenn.

The new chipper features a horizontal feed, 53" diameter disc, six knives and is available in an overhead or bottom discharge arrangement. Infeed spout size is 8¼" high, 14½" bottom width and 19" top width. Knife angle is designed to eliminate feeding jams common to some horizontal feed machines.

Southern deliveries of the first machines are expected early this year.



New Dodge Sprockets Are Easily Installed on Shafts

• Double strand roller chain sprockets that require no reboring or other machining for installation on shafts are being added to the Taper-Lock sprocket line now offered by Dodge Manufacturing Corp., Mishawaka, Ind., through its distributors.

The new double strand sprockets incorporate the same Taper-Lock principle used in millions of installations for mounting other Dodge products, such as single strand sprockets, V-belt sheaves, conveyor pulleys, and flexible and rigid shaft couplings. This method enables users to take sprockets, together with bushings of the desired shaft size, directly off the shelves of distributors and mount them quickly and securely without reboring, keyseating or set-screw machining.

Yours For The Asking

IF YOU WANT to increase your knowledge of the latest in products and services available for the forest industries, you will find it worthwhile to write to these suppliers and manufacturers for their literature. There is no charge or obligation.—Ed.

• ***Frick's*** new all-steel 20-foot two-saw type trimmers are completely explained and pictured in a new 4-p. leaflet. Included are general specs plus a close-up photo showing details of the enclosed gear case. Write Frick Co., Waynesboro, Pa.

• Two bulletins issued by ***Wisconsin Knife Works,*** Beloit, Wis., are off the press. Bulletin 200 is a completely new illustrated catalog covering Wisconsin's complete line of standard, special and commonly used clamp T-shot heads as used on moulders and matchers. Bulletin 801 covers instructions on development and making of shaper knives or any other hand-ground knife of similar nature. Also it gives recommendations on types and uses of grinding wheels.

• A new 16-p. bulletin showing a complete line of small, air-cooled compressors for industrial, automotive and general use is offered by ***Gardner-Denver Co.,*** Quincy, Ill.

• New weed killer for industrial use: ***Pacific Coast Borax*** Co.'s "Ureabor." Write to the company at 630 Shatto Place, Los Angeles 5, Calif., for literature which tells where, how and when to apply Ureabor for weed killing.

• A new 30-p. illustrated catalog of small diesels has been issued by American MARC, Inc., 1601 W. Florence Ave., Inglewood, Calif., on the ***Hallett Diesels.*** This line consists of low-horsepower, lightweight, air-cooled diesels. The catalog gives full data and specs on the complete line as well as much information of interest concerning small diesels in general.

• Read how ***Falk Steelflex*** couplings eliminate costly machine breakdowns in a new 4-p. brochure, complete with engineering drawings on how this coupling works and general description its features. Write to Western Machy Corp., 1035 S. E. 9th, Portland 14, Ore., and ask for DM-1-C.

• Steel strapping and packaging operations can now keep pace with the fastest production lines with the ***Acme Steel*** F3 strapping machine, described in a new folder just published by Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill. The folder describes and illustrates the F3 at work in a variety of industries.

• A most readable and interesting publication is Twin Disc's current issue of "Production Road." Its feature article, "Pathway to Progress" comprehensively traces the American construction industry from infancy to its present position. For a copy of this colorful booklet write the Editor, Production Road, Twin Disc Clutch Co., Racine, Wis.

• Pydraul AC, a fire and explosion resistant fluid developed by ***Monsanto Chemical Co.*** specifically as a lubricant for air compressors is the subject of a technical bulletin published by the company at 1700 S. Second St., St. Louis 4, Mo. Use of Pydraul AC in place of petroleum oil greatly reduces hazards of air compressor explosions and receiver fires, the bulletin tells.

1000 and 1

WHYTE STRAND

WIRE ROPES

designed to meet every requirement of your equipment

Whatever your equipment needs, there is a Macwhyte Wire Rope to serve you the sure, dependable way. WHYTE STRAND by Macwhyte is produced to meet every job specification under any conditions—PREformed for flexibility, and Internally Lubricated for outstanding service. Macwhyte Wire Rope is available in stock for immediate delivery. Ask for Catalog G-16 and recommendations for the correct Macwhyte Rope for you.

MACWHYTE COMPANY
2906 Fourteenth Avenue, Kenosha, Wisconsin
Manufacturers of Internally Lubricated PREformed Wire Rope, Braided Wire Rope Slings, Aircraft Cables and Assemblies, Monel Metal, Stainless Steel Wire Rope, and Wire Rope Assemblies. Special catalogs available.

MILL DEPOTS:
Seattle 4, 87 Holgate Street, Ph: MAin 1715
Portland 9, 1603 N.W. 14th Ave., Ph: CApitol 7-1661
San Francisco 7, 188 King Street, Ph: EXbrook 2-4966
Los Angeles 21, 2035 Sacramento St., Ph: TRinity 8383

Ask for free bulletin No. 5434 listing recommendations of the correct rope for each logging need.

TRIP LINE SAFETY FOR LOG HAULERS

NEW ESCO W. B.
SAFETY QUICK RELEASE

APPROVED

BY WASHINGTON AND OREGON STATE SAFETY COMMISSIONS

Designed and Tested to do your job faster and more safely. This new safety device permits load binders to be released at a safe distance from the load by merely pulling the safety catch with trip line. Eliminates danger of falling logs when binders are released. It is equally useful wherever a safe release connection is desirable. Weighs only 4½ pounds, capacity 15,000 pounds. *ESCO* Tools help you increase your operating efficiency. *ESCO*, the leading designer and manufacturer of better logging equipment is constantly developing new and better tools for the industry.

See your local ESCO Logging dealer.
Ask for ESCO Logging Rigging Catalog No. 185.

ESCO

ELECTRIC STEEL FOUNDRY COMPANY

2151 N. W. 25TH AVE. • PORTLAND 10, OREGON
MFG. PLANTS AT PORTLAND, ORE. AND DANVILLE, ILL.
Offices in Most Principal Cities
ESCO INTERNATIONAL, NEW YORK, N. Y.
IN CANADA ESCO LIMITED